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7273 SEEDS
Agricultural Implements·Poultry Supplies
The I.W. SCOTT Co.

500 LIBERTY AVENUE PITTSBURGH, PA. 113 DIAMOND STREET

1932

57th Year

LIBRARY
RECEIVED
★ FEB 17 1932 ★
New Snapdragon
Antirrhinum maximum

See page 43



PEACH GLOW

THE
ROSE

OLD-GOLD

FEB 9 1932



**SURE-CROP WAX
AND BOUNTIFUL
GREEN-POD BEANS**

Bountiful Beans

Early, hardy, well-named variety producing an abundance of large, handsome, stringless, green-podded Beans on healthy, dwarf bushes. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

Sure-Crop Beans

A dwarf, vigorous, early variety, producing large, bright yellow, waxy pods, stringless, brittle, and of high quality. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

New York or Wonderful Lettuce

A slow-growing, crisp-headed Lettuce which remains in prime condition for several weeks. It makes a large, heavy head, blanched creamy white within. This is sold on the markets as California Ice Lettuce. Pkt. 10 cts., oz. 30 cts., $\frac{1}{4}$ lb. 90 cts., lb. \$2.50.

Break o'Day Tomato

A remarkable new hybrid developed by the United States Department of Agriculture with thick, sweet flesh and a heavy, unblemished, scarlet skin. Very early. Ripens in about 125 days. Pkt. 15 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts., $\frac{1}{4}$ lb. \$2.25, lb. \$8.

Whipple's Yellow Corn

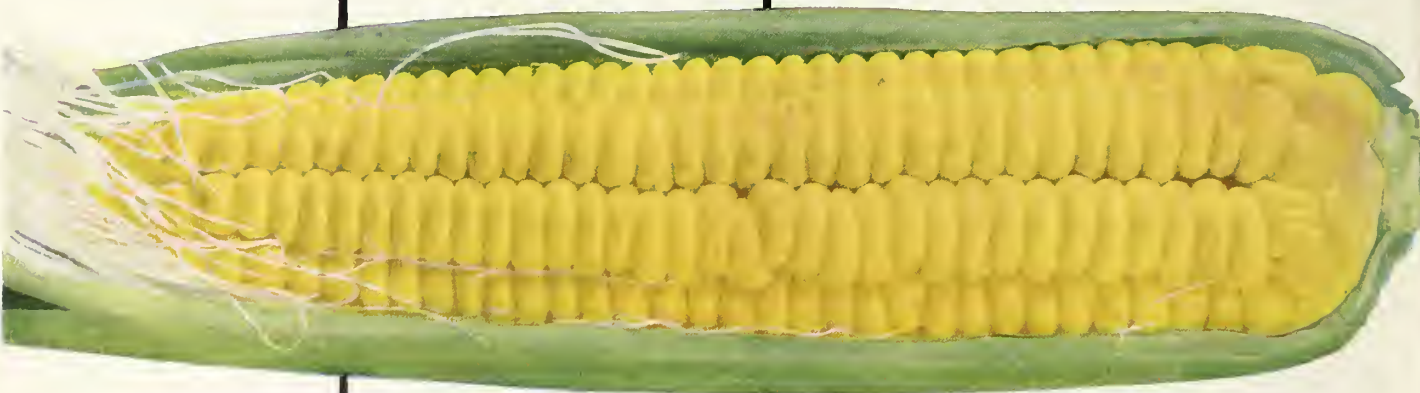
A sweet, golden yellow variety with ears about twice as large as Golden Bantam, and 12 to 16 rows of deep, finely flavored kernels. Matures in about 85 days. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.



BREAK O'DAY TOMATO



NEW YORK LETTUCE



WHIPPLE'S YELLOW CORN



Complete Farm and Garden Service

WITH the issue of our 1932 Catalogue, we renew our pledge to furnish to our customers the highest quality seeds, plants, and bulbs, and to supply them with the most up-to-date, improved implements and equipment necessary for modern, economical farming, gardening, and poultry raising. We make it a point to keep in advance of the steadily increasing interest in gardening and farming, and provide for our friends all the newer and better things in those lines.

We attribute our success of the past fifty-seven years to the loyal friends and customers who have

found satisfaction in our methods and merchandise. To all of them we extend our assurance that we shall continue our endeavor to retain their goodwill, and express our appreciation of their past pleasant relations.

We welcome the opportunity to serve the many recruits to the "back-to-the-farm" movement. We have men of practical experience in all branches of agriculture in our organization with whom they may freely consult about their problems.

We have tried to make this Catalogue complete and interesting, and we hope that those who have occasion to use it will find it helpful and trustworthy.

500 Liberty Avenue }
113 Diamond Street } PITTSBURGH, PA.

THE I. W. SCOTT COMPANY

Keeping Up with the Times

Gardeners always want to know about the new things. Among those offered in this book, let us introduce to you—

Asgrow Valentine Beans. A delicious new variety of green Bush Beans on page 4.

Golden Early Market Sweet Corn. An improvement on Golden Bantam, page 12.

Flower-lovers will be delighted to find novelties in the Flower Seed Department, particularly the—

California Giant Asters on page 33.

Remarkable new double **Golden Gleam Nasturtium** on page 40.

Curious Scabiosa-flowered Zinnia on page 45.

Among the new things adaptable to rock-garden and perennial borders—

The charming **Aster alpinus**, one of the ideal rock-garden plants on page 60.

The splendid orange-yellow **Viola, Apricot**, on page 61.

Gladiolus enthusiasts will find many new varieties on page 50, and those who delight in the Queen of Flowers will find many new Roses to interest them on page 55. Do not miss the new Climbing Roses on page 56, and no gardener can afford to overlook the perfectly blended Grass Seed which we offer on page 46.

Telephone ★ *AT* lantic 2022 TELEPHONE YOUR ORDER AND IT WILL BE GIVEN PROMPT AND CAREFUL ATTENTION

General Information and Suggestions

SPECIAL DISCOUNT LIST

5% Discount

will be allowed on orders amounting to \$10 and upward, selected from the following list, when cash is remitted with order.

Vegetable and Flower Seeds Bulbs and Nursery Stock

Insecticides	Dusters
Plows	Pruning Tools
Harrows	Ladders
Land-Rollers	Hand Mowers
Lawn-Rollers	Grindstones
Pulverizers	Feed-Cutters
Manure-Spreaders	Root-Cutters
Lime-Sowers	Grinding-Mills
Grain-Drills	Grain-Cleaners
Potato Planters and Diggers	Corn-Shellers
Seed-Sowers	Cider-Mills
Corn-Planters	Gasoline Engines
Weeders	Pumps
Cultivators	Washing-Machines
Planet Jr. Goods	Wagons
Garden Tools	Churns
Sprayers	Cream-Separators

Ask for prices on lines not quoted in Catalogue.

Special quotations will be given on large quantities of Seeds, Fertilizers, Implements, and other goods, on receipt of specifications.

Many of our lines are handled by reliable dealers and can be purchased through them.

Non-Warranty. We give no warranty, expressed or implied, as to description, quality, productiveness, or any other matter of any seeds, bulbs, or plants we sell, and will not be responsible for the crop. No responsible seedsman gives any warranty. If the purchaser does not accept the seeds on these terms they are to be returned at once.

A SUMMARY OF OUR DEPARTMENTS

VEGETABLE SEEDS. Not chasing after loudly heralded novelties, but always endeavoring to add every new sort of real value, we submit an up-to-date list of Vegetable Seeds, offered with the confident assurance that each item in it has been tested and found reliable.

FLOWER SEEDS, ROSES, SHRUBS, PLANTS AND BULBS. This department is showing an increase every year and is devoted to supplying the materials to make the home-grounds not only of the city and suburban resident but also of the farmer, attractive and in harmony with the well-kept farm and garden.

FIELD SEEDS. It is easy to increase or to lose in crop results because of the quality of seed used. The Field Seeds we offer are selected with special reference to their purity and germination. Every lot of seed is analyzed for purity and germination before it is offered for sale. Our aim has always been to furnish high-quality seeds rather than to sell inferior seeds at low prices.

Order Early. Our rush season comes in the months of April and May. To relieve congestion and reduce to a minimum the delay in filling orders, we solicit the coöperation of our customers by placing their orders early and taking delivery before the rush begins.

Remittances. These should be sent by Money Order, Registered Letter, Bank Draft, or Check. Amounts less than \$1 may be sent in postage stamps.

C. O. D. We will accept orders for shipment C. O. D. except on shrubs, roses, cabbage, and strawberry plants, or other perishable goods.

Price Changes. Prices are subject to change without notice. Should the price of any commodity be reduced, the difference in price will be refunded, or in case of advance, the customer will be notified before shipping.

Delivery. All prices are f.o.b. our store, or cars Pittsburgh, except where otherwise noted. Extra charge will be made for city and suburban delivery.

Quantity Rates. Half-bushels will be furnished at bushel rates; half-pecks at the peck rate; and half-pounds at the pound rate.

PARCEL-POST SHIPMENTS

Vegetable and Flower Seeds. We pay the postage on all packets, ounces, and pounds; also on Beans, Corn, and Peas in half-pints, pints, and quarts. Larger quantities add for postage at your zone rate.

Bulbs and Nursery Stock. Parcel-Post rates are given in connection with the prices.

Other Mailable Goods. Postpaid prices are named in the Catalogue and apply within the Second Parcel-Post Zone. Additional postage must be included beyond the Second Zone.

AGRICULTURAL IMPLEMENTS. We offer a complete line of all kinds of Farm Machinery, Garden and Lawn Implements, carefully selected from the products of the oldest and most reliable manufacturers. Our guarantee stands back of every implement that we offer.

DAIRY, POULTRY, PET, AND BEE SUPPLIES. In these departments we have specialized in items that will aid the farmers who do more than till the soil. Thus we have come to be the recognized headquarters for dairymen, poultrymen, and bee-keepers. Here also can be supplied the proper feeds for dogs, either pets or for show, and supplies for canaries and other birds.

OUR MAIL-ORDER TRADE. While we are always glad to have our customers come to our store, inspect our goods, and leave their orders, our list of regular mail-order customers is constantly growing, and appreciating the confidence thus placed in our service, it shall always be our aim to see that this branch of our trade receives special attention.

VEGETABLE SEEDS

The home-gardener, as well as the commercial grower, will find in our Vegetable Seed Department an unusually complete list of the best varieties in cultivation. There are varieties to suit every taste and every purpose. In describing them we have endeavored to make selection easy by telling the advantages as well as the disadvantages of each sort, describing as accurately as possible just how each should perform under normal conditions and good cultivation.

Quality First. For more than a half-century we have been supplying the most critical market-gardeners in our immediate territory with the best and purest strains of Vegetable Seeds. The steady increase of our trade during all these years among our home-gardeners, as well as those from distant points, is the best evidence that our seeds give satisfaction.

The test of a seed is the crop it produces—not the price paid for it. It is always our endeavor to supply only the highest bred and most vigorous seeds it is possible to grow. Even the best of seed is none too good when growing conditions are unfavorable, but poor seed will not produce good results, no matter

how much care and help the crop receives. The old saying, "The best is the cheapest," applies with greater force to seeds than to any other commodity. So with us, we aim to supply the highest quality at a fair price; quality comes first.

Whether you order by the packet or the pound, you will receive the same high quality seeds. All of our packet seeds, both vegetable and flower, are put up from exactly the same stocks that we use for pounds, pecks and bushels, so the small gardener can depend upon getting seeds as fresh and as choice in every way as those which the most critical market-gardeners demand. No order is too small to merit our best attention.

ASPARAGUS *Three ounces of seed will sow a 100-foot row; 15 pounds will sow an acre*

Tender young Asparagus shoots fresh from the garden! Those who know Asparagus only as it comes out of a can or with the fine flavor lost in hours of travel from the grower's fields to the table, have no idea of the delicious treat in store for them. Yet, contrary to common belief, Asparagus is no more difficult to grow than any other garden crop.

Equally good results may be secured by planting seed or roots; seed is cheaper but from one to two years' time is saved by starting with roots.

Once established, an Asparagus bed will continue to bear bountiful crops for years; so remember that a little care and patience at the start will be well repaid. Choose a well-drained spot and dig the soil deeply, pulverize it thoroughly and, at the same time, work in a goodly quantity of fertilizer. If the soil is heavy, mix in sand or coal ashes also. If you start with seed, sow it early in the spring, in shallow drills 12 to 15 inches apart, and when the plants are about 4 inches high, thin out the weak and crooked ones, leaving about four good strong plants to the foot.

The following spring, dig up the roots and transplant them to the permanent bed, in rows at least 3 feet apart, setting them 1½ to 2 feet apart in the rows. The roots should be well spread out, with the crown or top about 3 inches below the general level of the bed. Barely cover at first but fill in around the plants as they grow until the level of the surface is reached. No cuttings should be made the first year after transplanting, but the second season will bring a good crop.

MARY WASHINGTON. An improvement on Martha Washington and the result of years of breeding and selection by the U. S. Department of Agriculture. Plants vigorous, very productive and nearly rust-free. Shoots dark green, large, straight, with heavy purple overtone. Seed, pkt. 10 cts., oz. 35 cts., ¼lb. \$1, lb. \$3.50.

Two-year-old roots, by mail, postpaid, 65 cts. per doz., \$2.25 for 50, \$4 per 100; by express, not prepaid, \$11 for 500, \$20 per 1,000.

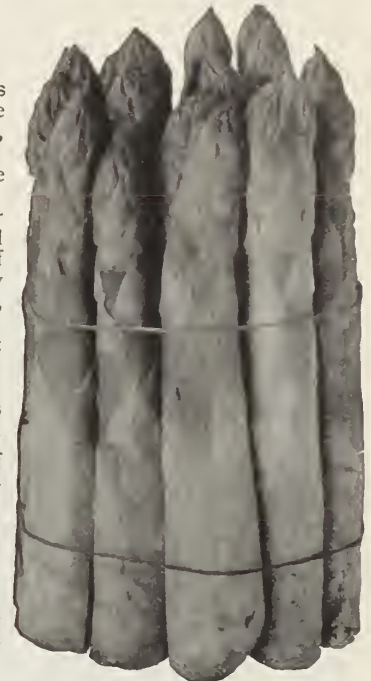
MARTHA WASHINGTON RUST-RESISTANT. A new variety developed by the U. S. Department of Agriculture. It produces abundant crops of large, tender stalks and is practically immune from "rust" and other Asparagus diseases. Without doubt, the finest strain of Asparagus now available. Seed, pkt. 10 cts., oz. 25 cts., ¼lb. 50 cts., lb. \$1.50.

Two-year-old roots, by mail, postpaid, 65 cts. per doz., \$2 for 50, \$3.75 per 100; by express, not prepaid, \$10 for 500, \$18 per 1,000.

CONOVER'S COLOSSAL. Large green stalks of enormous size and very productive. The standard market variety.

PALMETTO. Comes early; stalks light green. Smaller than the foregoing but more freely produced, and of better quality.

SEED of above two varieties, pkt. 10 cts., oz. 15 cts., ¼lb. 30 cts., lb. \$1.



Asparagus, Martha Washington



Italian Broccoli

Broccoli

A kind of hardy cauliflower which thrives best in moist fall weather. Although an old-time garden product, its recent popularity urges generous planting. Grow like late cauliflower, sowing in May and transplanting in June or early July.

(An ounce of seed will produce 2,000 plants)

DI RAPA. Productive new variety of high quality, with large, firm, bright green heads, which mature earlier than varieties commonly grown. Pkt. 25 cts., oz. 75 cts., ¼lb. \$2.50.

TRUE ITALIAN SPROUTING. A distinct variety with large, solid heads that stay green. Many sprouts develop from the leaf-axils after the heads are cut, and each terminates in a small head which is also edible. Pkt. 25 cts., oz. 75 cts., ¼lb. \$2.50.

French Artichoke

This highly prized salad can be grown in our climate, provided the plants are given light protection over winter. Start the seed indoors and give the same treatment as you would tomatoes, transplanting to the garden in May. The plants are perennial.

(An ounce of seed will produce 500 plants)

LARGE GREEN GLOBE. The best variety. Pkt. 15 cts., oz. 75 cts., ¼lb. \$2.75, lb. \$10.

Brussels Sprouts

Cultivate like cabbage, sowing the seed in April or May, either in a coldframe or in a sheltered spot in the garden, and transplant in June or early July, setting the plants 2 feet apart. The "sprouts" are like miniature cabbages growing along the main stem.

(An ounce of seed will produce 2,000 plants)

HALF-DWARF IMPROVED. Pkt. 10 cts., oz. 40 cts., ¼lb. \$1, lb. \$3.

**INOCULATE THIS
SEED WITH
STIMUGERM**

BEANS

**Everyone Can
Grow Beans**

Few crops yield more bountiful returns from limited space. There are several classes of Beans and many varieties: all are rich in food value, containing a high proportion of muscle-building protein; served as "Snap" or "String" Beans they are particularly rich in vitamins. There are Green-podded, Wax-podded, and Lima Beans, and of each there are dwarf or bush and pole or running varieties. Generally speaking, the bush kinds bear earlier but the Pole Beans bear more heavily and for a longer time. If you have plenty of space, our advice is to grow some of both, depending on the dwarf sorts for the first pickings and on the pole varieties for the late or main crop. Between Green-podded and Wax-podded varieties there is little to choose, although the Green-podded Beans are generally preferred in local markets.

Growing Bush or Dwarf Beans in the Garden. Even a poor soil will grow Beans, although the heaviest yields are, of course, obtained on well-worked and moderately heavy loams. Wait until the ground is warm before you sow—early May is a good time to make the first sowing in this latitude. Open up furrows $1\frac{1}{2}$ to 2 feet apart and drop the Beans about 3 inches apart in the furrow, covering them $1\frac{1}{2}$ to 2 inches deep. Later plantings should be covered $2\frac{1}{2}$ to 3 inches deep. Keep the soil well loosened around the plants from the time they are large enough to cultivate, but avoid touching them when they are wet with rain or dew, as this will nearly always cause the pods to "rust." For a constant supply of "String" Beans all summer make a new sowing every two weeks from early May until the first of August.

A quart of seed will sow 100 feet of furrow, $1\frac{1}{2}$ to 2 bushels, depending on variety, will be required for an acre when the seed is planted in drills.

Dwarf Green-podded Beans

ASGROW STRINGLESS BLACK VALENTINE. A new, hardy, prolific Bean of the true Black Valentine type, wholly without strings. Unsurpassed by any other on the market, and of easy culture. Quick-growing. $\frac{1}{2}$ pt. 25 cts., pt. 40 cts., qt. 75 cts., pk. \$4, bus. \$15.

BOUNTIFUL. A splendid variety, well-named, for it is extremely productive

and always reliable. It is hardy and thrives on a variety of soils. In a good many gardens it is the first Bean to come into bearing and it continues to bear for a long time if the pods are picked

as fast as they become ready for use. The pods are flat, of good size, and handsome appearance, always stringless, tender until full grown and of excellent flavor. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

BURPEE'S STRINGLESS GREEN-POD. Another general favorite. Stringless Green-Pod is early and productive, with pods a little shorter than Bountiful but round, thick, and very meaty; always perfectly stringless and tender even when old. If your soil is heavy clay, you will probably find it the best variety to grow. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

GIANT STRINGLESS GREEN-POD. A little later to bear than the kinds described above but a very dependable producer of big crops. A good Bean to plant to succeed the first early varieties. The pods are long, round, and meaty, always stringless and tender, dark green and very handsome. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

BLACK VALENTINE. A popular Bean among the market-gardeners on account of its hardiness, attractive appearance, and good shipping qualities. Black Valentine is medium early and a reliable heavy cropper, bearing long, straight, round pods which, however, are of only fair quality. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

IMPROVED EARLY RED VALENTINE. Extra-early strain of the old favorite, Red Valentine. The pods are round, meaty, and well-flavored. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

NEW STRINGLESS GREEN-POD. In many respects similar to Full Measure, but four to six days earlier. Especially vigorous in growth, and is not as susceptible to adverse growing conditions as many of the stringless varieties. The pods are long, straight, round, meaty, entirely stringless, and of fine table quality. $\frac{1}{2}$ pt. 20 cts., pt. 35 cts., qt. 60 cts., pk. \$3.25, bus. \$12.

FULL MEASURE. One of the newer varieties which is coming into demand for both market and home-gardens. It is early and under favorable conditions will outyield all other Green-podded Beans. The pods are of good size, round, thick, stringless, tender, and of excellent quality. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

ITALIAN BLACK-EYE. A very prolific yielder with long, round, slender pods, medium green in color and stringless. It is a main-crop variety and can be used green or for dry shell purposes. The dried seed is cream-colored with black eye. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.



Giant Stringless Green-Pod Beans



Bountiful Beans



Sure-Crop Stringless Wax Beans

the ripe Beans are red in color. $\frac{1}{2}$ pt. 20c., pt. 30c., qt. 50c., pk. \$2.75, bus. \$10.

WHITE NAVY, or Pea Bean. Used mostly for field planting; a sure cropper and extremely prolific. The dried Beans are small, round, and white. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

DWARF WAX-PODDED BEANS

The Yellow- or Wax-podded Beans are considered more handsome in appearance and bring higher prices in some sections than the Green-pods. Generally speaking, they are good producers, but where rust or mildew is prevalent, do not stand up quite so well as the Green-podded varieties.

SURE-CROP STRINGLESS WAX. A strong-growing, early variety well described by its name, for it is a most dependable producer of large crops under all conditions. The pods are of good size and most attractive in appearance, being broad, semi-round, and bright yellow in color, entirely stringless, brittle, and of fine quality. We can highly recommend Sure-Crop for both market and home-gardens. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

WARDWELL'S KIDNEY WAX. An old favorite, well known to gardeners everywhere. It is hardy, early, and of splendid quality. The pods are broad, flat, brittle, and almost stringless, waxy yellow in color. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

ROUND-POD KIDNEY, or Brittle Wax. This Bean is notable for its exceptional quality, being superior in flavor, remarkably brittle and tender, and absolutely stringless even after the Beans have ripened. The pods are long and round, bright yellow in color and very handsome. With good culture it produces very heavy crops. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

KEENEY'S RUSTLESS GOLDEN WAX. A remarkably vigorous sort which is less liable to "rust" than other Wax-podded Beans. A good producer of medium-sized, flat, well-filled stringless pods. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

IMPROVED GOLDEN WAX. Pods are flat and a little longer and thicker than those of the original Golden Wax. Hardy and prolific; quality fair. A profitable Bean for the market-gardener. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

PENCIL-POD BLACK WAX. A late-bearing variety, valuable for mid-season use. Not a heavy yielder but the long, slender, round pods are of fine quality. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

Use Bourbon's Fluosilicate Mixture for the Mexican bean beetle. See page 80

DWARF GREEN-PODDED BEANS, continued

STRINGLESS GREEN-POD REFUGEE. An improvement on the old 1,000-to-1, being perfectly stringless even when the pods have reached full size and are old enough to shell. The plants are large and thrifty, producing heavy crops; pods large, round, and fleshy. Ideal for canning. $\frac{1}{2}$ pt. 20 cts., pt. 35 cts., qt. 60 cts., pk. \$3.25, bus. \$12.

REFUGEE, or 1,000-to-1. A strong-growing, late-bearing variety, which will probably produce more bushels to the acre than any other Green-podded Bean. Largely grown for canning. Pods are long, round, tender, and of fine flavor but become stringy when full grown. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

DWARF GREEN-PODDED BEANS FOR SHELLING

DWARF HORTICULTURAL. A fine producer of green Shell Beans; useful as a "String" Bean also, for the young pods are tender and meaty. The ripe Beans are round and speckled with purplish red. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

WHITE KIDNEY. Largely grown for dry Shell Beans. Plants are tall, vigorous, and productive. The pods are of good size and showy but tough, and the ripe Beans are large, kidney-shaped, pure white and do not discolor when cooked. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

WHITE MARROWFAT. The favorite Bean for baking. A good producer of large, white Beans of fine quality. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

RED KIDNEY. Resembles the White Kidney except that



Wardwell's Kidney Wax Beans

BUSH LIMA BEANS

One of the finest treats the garden offers is fresh, green Lima Beans. But remember that the seed is tender and will not grow in cold weather or wet ground. Wait until warm weather has surely come (the last of May is generally safe in this latitude), and then sow in a warm, sunny spot, preferably in a rich, mellow soil. Sow Bush Lima Beans in furrows about 2 inches deep and at least 2 feet apart, spacing the seeds 3 to 4 inches apart in the furrow. They will sprout quicker if planted with the "eyes" down. Later on the plants may be thinned to stand 8 to 10 inches apart as they yield best if given plenty of room. The Bush Limas bear earlier than the Pole varieties and are, therefore, more useful where the growing season is short.

A quart of seed will sow 100 feet of furrow; a bushel will sow an acre

BURPEE IMPROVED. A vigorous, productive variety. The bushes are large and bear loads of big, broad pods, each containing 4 to 6 Beans of the largest size and finest quality. Medium early. $\frac{1}{2}$ pt. 25 cts., pt. 40 cts., qt. 75 cts., pk. \$4, bus. \$15.

FORDHOOK. Probably the most popular Bush Lima and one of the best for the home-garden for it is extra early and extremely prolific, bearing good-sized pods which contain 3 to 5 large, thick, meaty Beans of delicious quality. $\frac{1}{2}$ pt. 25 cts., pt. 40 cts., qt. 75 cts., pk. \$4.25, bus. \$16.

BURPEE'S BUSH. A hardy, reliable variety; prolific, medium early, and of good size and quality. $\frac{1}{2}$ pt. 20 cts., pt. 35 cts., qt. 65 cts., pk. \$3.75, bus. \$14.

WOOD'S PROLIFIC. An improved strain of the Dwarf Sieva or small-seeded Lima. It is very productive and hardy; valuable for planting where the large-seeded Limas do not thrive. The quality is extra-fine. $\frac{1}{2}$ pt. 20 cts., pt. 35 cts., qt. 65 cts., pk. \$3.75, bus. \$14.

POLE LIMA BEANS

These take longer to bear than the Bush Limas, but yield larger crops and continue to bear for a longer period. The seed is usually planted in hills, at least 3 feet apart each way, dropping 4 to 6 Beans to the hill. Set poles 8 to 10 feet long in each hill to support the vines.

A quart of seed will plant 100 hills; 20 quarts will plant one acre

LEVIATHAN. A general favorite, being early, vigorous, and productive, bearing loads of giant pods, well filled with large tender Beans. One of the most reliable varieties for the home-garden. $\frac{1}{2}$ pt. 20 cts., pt. 35 cts., qt. 65 cts., pk. \$3.50, bus. \$13.

EXTRA-EARLY JERSEY. Comes into marketable size a week earlier than other varieties. Good size and fair quality. $\frac{1}{2}$ pt. 20 cts., pt. 35 cts., qt. 65 cts., pk. \$3.50, bus. \$13.

SIEBERT'S EARLY. Extra-early and one of the most productive. When freshly shelled the Beans are large and thick through and of fine quality. $\frac{1}{2}$ pt. 20 cts., pt. 35 cts., qt. 65 cts., pk. \$3.50, bus. \$13.

DETROIT MAMMOTH. The largest-podded variety in cultivation. Medium early, extremely vigorous and prolific, bearing pods 9 to 11 inches long, containing 5 to 7 mammoth Beans of excellent quality. $\frac{1}{2}$ pt. 20 cts., pt. 35 cts., qt. 65 cts., pk. \$3.75, bus. \$14.

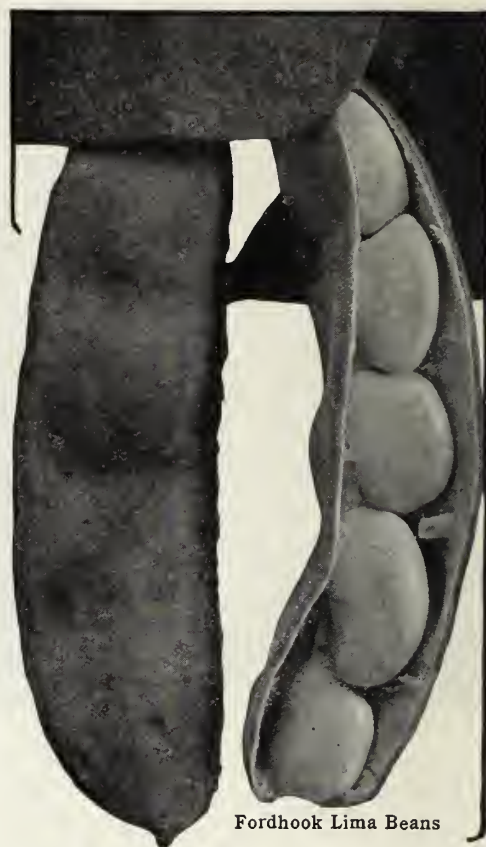
KING OF THE GARDEN. The strongest growing and most productive of the large Limas, bearing broad pods 5 to 6 inches long, containing 4 or 5 large, flat Beans. Allow only two vines to each pole. $\frac{1}{2}$ pt. 20 cts., pt. 35 cts., qt. 65 cts., pk. \$3.50, bus. \$13.

CARPINTERIA. This medium-late variety sets the standard for quality among Pole Limas. It bears large pods, containing 3 to 5 Beans which are very thick and mealy and retain their green color even when ripe. $\frac{1}{2}$ pt. 20 cts., pt. 35 cts., qt. 65 cts., pk. \$3.50, bus. \$13.

LARGE WHITE. The old standard large-seeded Pole Lima; medium early and vigorous. $\frac{1}{2}$ pt. 20 cts., pt. 35 cts., qt. 65 cts., pk. \$3.50, bus. \$13.



Leviathan Pole Lima Bean

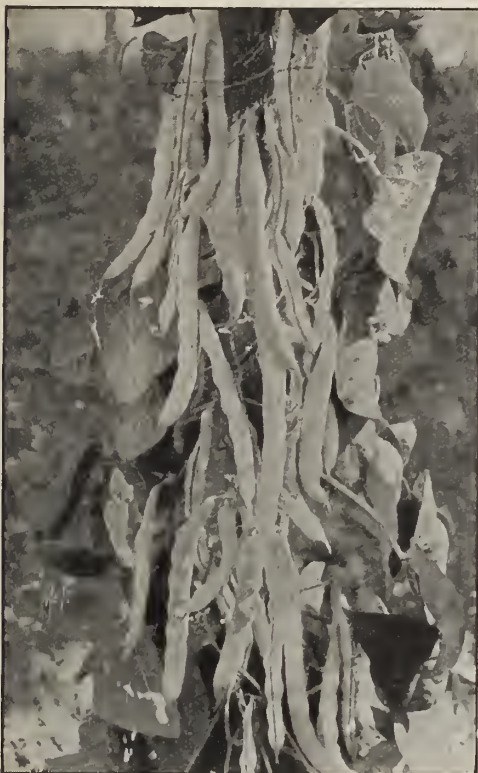


Fordhook Lima Beans

We aim to carry a complete line of Insecticides, and the machines for applying same. Our line of Sprayers and Dusters is complete and up-to-date, and meets all requirements. Prices and descriptions of Insecticides will be found on pages 76 to 81 and Sprayers and Dusters on pages 118 to 123.

For the Mexican bean beetle we recommend Bourbon's Fluosilicate Mixture, described on page 80, or if liquid spray is preferred, we suggest Ever Green, described on page 81.

All seeds postpaid at prices quoted, except as noted under "Parcel Post Shipments"
on page 2



Kentucky Wonder Beans

WAX- AND GREEN-PODDED POLE BEANS

The Pole Beans do not come into bearing so quickly as the Bush varieties but they yield much larger crops and, if kept picked, will continue to bear for several weeks. As the seed is rather tender, they should not be started until about two weeks after it is safe to sow Bush Beans. They succeed best in a well-drained mellow soil which has been liberally enriched with manure. The usual practice is to grow them in hills placed 3 to 4 feet apart, using poles about 8 feet long to support the vines. Drop 6 to 10 Beans in each hill and cover 2 inches deep, thinning out when the plants are well started so as to leave only 3 or 4 of the strongest on each pole. By using string or wire as support, one stout pole may be made to serve several hills.

A quart of seed will plant 100 to 200 hills; from 8 to 10 quarts will plant an acre according to the size of the Beans

KENTUCKY WONDER. The most popular Pole Bean. It is early, reliable under all conditions, and immensely productive, bearing long, round, dark green pods which are tender, stringless when young, and of fine quality. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

KENTUCKY WONDER WAX. Similar in vigor and productiveness to the green-podded Kentucky Wonder but the pods are broader and light yellow in color, fleshy and brittle and slightly stringy. $\frac{1}{2}$ pt. 20 cts., pt. 35 cts., qt. 65 cts., pk. \$3.50, bus. \$13.

GOLDEN CLUSTER WAX. Extra-early and bears for a long season. The pods are of medium length, broad and flat, waxy yellow and most attractive in appearance. In flavor the Golden Cluster Wax Bean is unsurpassed, but the pods should be picked young for they become rather stringy when full grown. $\frac{1}{2}$ pt. 20 cts., pt. 35 cts., qt. 65 cts., pk. \$3.50, bus. \$13.

LAZY WIFE. Late but very productive, carrying great clusters of green pods which are 5 to 6 inches long, semi-round, meaty, stringless, tender, and richly flavored. Useful also as a Shell Bean. $\frac{1}{2}$ pt. 20c., pt. 35c., qt. 65c., pk. \$3.25, bus. \$12.

BURGER'S GREEN-POD STRINGLESS. Also known as the White-seeded Kentucky Wonder. Extra-early and prolific, bearing round, brittle pods of fine quality. $\frac{1}{2}$ pt. 20 cts., pt. 35 cts., qt. 65 cts., pk. \$3.25, bus. \$12.

KING HORTICULTURAL. An improvement on the old London Horticultural, or Speckled Cranberry. Late but productive; pods short, broad, pale green streaked with red. The Beans are extra-good, either green or dry. $\frac{1}{2}$ pt. 20 cts., pt. 35 cts., qt. 65 cts., pk. \$3.25, bus. \$12.

SCARLET RUNNER. A distinct type largely used as an ornamental climber. It grows rapidly; the foliage is luxuriant and the bright scarlet blossoms are most attractive. Pods light green. The dried Beans are used like Limas. $\frac{1}{2}$ pt. 25 cts., pt. 40 cts., qt. 75 cts., pk. \$4, bus. \$15.

ASPARAGUS, or Yard-Long. A quick-growing Pole Bean with slender, curved pods 2 feet or more in length. Tender and flavorful when young. $\frac{1}{2}$ pt. 45 cts., pt. 75 cts., qt. \$1.25.

Mangel-Wurzel or Cattle Beets

The Mangels furnish large quantities of nutritious and healthful food for stock and poultry—yields of twenty-five to thirty tons and more per acre are often obtained. Sow the seed in April or early May and when the plants are 2 or 3 inches high, thin them out to stand 8 to 10 inches apart. Harvest before frost and store in pits outdoors or in a dry, frost-proof cellar.

Five to 6 pounds of seed will sow an acre

LONG RED MAMMOTH. The heaviest yielder, producing enormous roots which grow largely above ground and are easy to harvest. Particularly fine for milch cows. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 60 cts., 5 lbs. \$2.75.

NORBITON GIANT LONG RED. Somewhat similar to the above. Excellent for feeding to stock. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 60 cts., 5 lbs. \$2.75.

RED GLOBE. Oval or globe shaped, giving heavy yields on shallow soils. A good keeper. Oz. 10c., $\frac{1}{4}$ lb. 20 cts., lb. 60 cts., 5 lbs. \$2.75.

GOLDEN TANKARD. Large, long roots unusually high in feeding value. A splendid cropper on fairly deep soils. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 60 cts., 5 lbs. \$2.75.

WHITE SUGAR. Very productive, rich in sugar and especially good for stock feeding. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 60 cts., 5 lbs. \$2.75.

KLEIN WANZLEBEN. Rigorously selected for high sugar content and the most popular variety with the sugar-beet growers. We offer a productive, easily grown strain. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 60 cts., 5 lbs. \$2.75.



Long Red Mangel-Wurzel

BEETS

But little space is required to grow a good crop of Beets, and almost any soil will do, although the ground should be dug deeply and made fine and mellow with fork and rake if you want smooth, tender, well-developed roots. Make a first sowing as early in the spring as the ground can be worked. Scatter the seed in drills 15 to 18 inches apart, covering the seed about an inch deep and pressing the soil down firmly above it. When the seedlings are about 3 inches high, thin them out so that they will stand 3 to 4 inches apart in the row. The little Beets and "greens" removed in thinning, cooked together, make a delicious dish. Frequent cultivation will help to bring the crop along rapidly. As you harvest the Beets, pull out alternate plants, thus leaving more room for the rest to develop. You can insure a continuous supply of fresh young Beets for the table by making sowings every three to four weeks from early spring up to the middle of July. Late in June make a large planting to produce Beets for winter use. They should be harvested before frost and stored in pits outdoors, or in a dry cellar, covered with sand to prevent shriveling or drying out.

If you want to beat your neighbor with early Beets in the spring, start some seed in a coldframe or in a box indoors in February or March and reset the plants in the open garden early in April.



Detroit Dark Red Beets

CROSBY'S EXTRA-EARLY.

The standard early variety for both home-garden and market use. A very superior selection from the old flat Egyptian, being more globe-shaped, nearly as early, and of better quality. The skin is dark red and the flesh deep red.

Our stock is highly bred and runs very uniform in shape and size. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 85 cts., 5 lbs. \$3.75.

EXTRA-EARLY EGYPTIAN. One of the earliest varieties, making medium-sized, flat, smooth roots with dark crimson skin and flesh. Fine for first crop. Specially adapted for transplanting from hotbeds in early spring. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 85 cts., 5 lbs. \$3.75.

EARLY MODEL. An extra-early Beet that is top-notch in quality. The roots are uniformly globe-shaped, with smooth, dark red skin and fine-grained, crimson flesh. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 85 cts., 5 lbs. \$3.75.

EARLY WONDER. A new strain of Crosby's Egyptian Beet. Smooth, dark red flesh. Early. Extra-good for market-gardeners. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 85 cts., 5 lbs. \$3.75.

EARLY BLOOD TURNIP. An old standby; round with small tap-root, dark red skin and bright red flesh of good quality. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 85 cts., 5 lbs. \$3.75.

DETROIT DARK RED. This improved strain of the old Blood Turnip Beet is undoubtedly the most popular variety in cultivation. It is early, smooth, and uniformly globe-shaped, with dark red skin and flesh, fine-grained, tender and sweet. Excellent for winter keeping. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 85 cts., 5 lbs. \$3.75.

CRIMSON GLOBE. A medium-early Beet of good globe shape and dark red skin and flesh. Popular with market growers. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 85 cts., 5 lbs. \$3.75.

SWISS CHARD

This is a kind of beet which does not make edible roots but produces instead quantities of large leaves which are prepared like spinach. In addition, the stems and midribs make a palatable dish when stewed like celery. With growing appreciation of the valuable part that "greens" play in our diet, Swiss Chard has become one of our most popular vegetables. The seed should be sown in early spring and given the same culture as beets, except that the plants should be thinned to stand 8 to 10 inches apart. Pull the leaves off as they become ready and new ones will grow in their place.

LUCULLUS GIANT. A tall variety with deeply wrinkled and crumpled leaves. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 85 cts.

FORDHOOK GIANT. An outstanding new variety with curly, rich blue-green leaves and broad white ribs, of a quality better than spinach. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 85 cts.



Early Wonder Red Beet



Fordhook Giant Swiss Chard



Early Flat Dutch



Copenhagen Market



FROST-PROOF CABBAGE PLANTS

Will Mature Heads Two to Three Weeks Earlier Than Your Home-Grown Plants and Double Your Profits

Our trade on these plants is increasing every year, and we do not know of any customer who was dissatisfied with the results produced when the crop matured. A person wanting extra-early Cabbage for home use or market **CAN'T AFFORD NOT TO USE THESE PLANTS.**

There are a number of islands along the seacoast of South Carolina where the soil and climatic conditions are just suited for growing tough, hardy Cabbage plants during the winter and early spring. The seed is planted in the open field during the months of October, November, December, January, and February. The plants make a slow but steady growth, until at eight to ten weeks of age they are very tough and hardy, the buds are purple and the outer leaves a reddish brown. When in this condition they can be shipped to territory farther north and be planted in the open ground a month to six weeks sooner than the home-grown hotbed or coldframe plants. These **Frost-Proof Cabbage Plants** will stand a temperature of 20 degrees above zero without injury; the land freezing, or the plants being covered with ice, sleet or snow after they are planted will not injure them.

The top of the plant does not grow until your regular spring weather opens up, but the roots grow from the time they are planted, and just as soon as spring weather starts, the estab-

lished root-growth assimilates the fertilizer in the soil, the plants grow very fast, maturing headed Cabbage two to three weeks sooner than you can mature them from hotbed and coldframe plants.

You know what the difference in profit will be if your crop is matured and marketed before the general crop from home-grown plants is matured, but **to get this advantage these frost-proof Cabbage plants must be planted a month or six weeks earlier than you would plant home-grown plants** from hotbeds or coldframes.

Our Cabbage plants are grown from the best Long Island grown seed and are shipped direct from our growing station in the South by parcel post or express. We can fill orders from December 1 to May 15.

The plants when received will be somewhat wilted and have a hard, stunted appearance, which will be disappointing to persons who have never used these plants before. Regardless of appearance, they will produce the crop results.

Varieties: EARLY JERSEY WAKEFIELD, CHARLESTON LARGE TYPE WAKEFIELD, COPENHAGEN MARKET, SUCCESSION, and EARLY FLAT DUTCH

PRICES BY PARCEL POST, POSTAGE PAID.—In lots of 100, 200, 300, or 400 plants at 50 cts. per 100 plants; 500 plants for \$1.60; 1,000 or more at \$3 per 1,000 plants.

Orders are filled by the 100, not 250 or 350. These prices are for even quantities of one variety to package; if you ordered 200 of one variety and 300 of another variety you would pay at the 100 rate.

PRICES BY EXPRESS, BUYER PAYING EXPRESS CHARGES.—In lots of 1,000 to 5,000 plants at \$2 per 1,000; 5,000 or more at \$1.50 per 1,000. Plants are packed for express shipment, 1,000 or 2,000 plants of a variety to package. They weigh about 25 pounds per 1,000 plants, packed for shipment.

Order Early to Get Plants Delivered in Time. When we receive your order for these plants, we have to forward it to our growing station which takes several days. Plants are shipped direct to you from growing station. Plants cannot be pulled or shipped when beds are wet. We sometimes have a week or ten days of continued wet weather which prevents shipment. Orders may be sent any time after receiving our catalogue and plants will be sent when wanted, but shipping date should always be specified on the order.

ORDER OUR HARDY SOUTHERN FIELD-GROWN ONION PLANTS ADVERTISED ON PAGE 24

CABBAGE

The chief requisites for growing Cabbage are rich soil and plenty of water. If your soil is hard and poor, add manure, the more the better, and dig it in thoroughly, making the surface as fine and mellow as possible. For early Cabbage, sow seed in hotbed or boxes indoors in January or early February. As transplanting time approaches (about April 15) "harden" the plants by exposing them to the air on warm days so that cold weather or even a light frost will not injure them after they are set out. Start the second crop in March or April. Winter Cabbage is sown in early May and transplanted to the garden in July.

Rows should be at least 2 feet apart, and plants from 1½ to 2 feet apart in the rows, according to variety, the early sorts requiring less space than the large-heading winter Cabbages.

Frequent doses of nitrate of soda will push the young plants along rapidly. The most troublesome pest is the green cabbage worm which, however, is easily discouraged by dusting with powdered arsenate of lead or similar insecticides. Cultivation to keep down the weeds and preserve the moisture in the soil is important. Give water if necessary during the dry spells.

An ounce of seed will produce 1,500 to 2,000 plants

GOLDEN ACRE. A new early round-headed Cabbage, resembling Copenhagen Market, but 8 to 10 days earlier. Earliness and fine quality make it a leader of the round-headed varieties. Pkt. 10 cts., oz. 45 cts., ¼lb. \$1.25, lb. \$4.

COPENHAGEN MARKET, SPECIAL STRAIN. The result of years of breeding by European growers and far superior to the ordinary strain. A profitable variety for market-gardeners. Pkt. 15c., oz. 75c., ¼lb. \$2.25, lb. \$8.

COPENHAGEN MARKET. This highly bred Danish variety has come to be the leading early Cabbage, both for market and home-gardens. It grows rapidly to large size, maturing in about 100 days from sowing, as early as standard strains of Jersey Wakefield. Being of compact growth with few outer leaves, the plants can be set close together. The heads are round, extremely solid, with small core and of excellent quality. Pkt. 10 cts., oz. 35 cts., ¼lb. \$1, lb. \$3.

SELECT EARLY JERSEY WAKEFIELD. A leader for many years. Matures its rather small, solid, pointed heads in 100 days from sowing. One of the most reliable early sorts; hardy and resistant to frosts and unfavorable weather. Can be planted close together. Pkt. 10c., oz. 30c., ¼lb. 75c., lb. \$2.50.

CHARLESTON LARGE WAKEFIELD. A selection from Jersey Wakefield, maturing a week to ten days later and producing considerably larger, bluntly pointed heads. Solid and a good shipper. Pkt. 10 cts., oz. 30 cts., ¼lb. 75 cts., lb. \$2.50.



Danish Ballhead Cabbage



Golden Acre Cabbage

GLORY OF ENKHUIZEN. A Dutch strain which closely resembles Copenhagen Market, but makes a little larger growth and matures a week to ten days later. Being less particular as to soil, it is a more reliable Cabbage for the home-garden and a splendid second-early for market. The heads are solid and of fine quality. It is a good keeper and is sometimes grown as a winter Cabbage. Pkt. 10c., oz. 35c., ¼lb. \$1, lb. \$3.

EARLY SUMMER. An old, well-known, second-early Cabbage of the flat or drumhead type. The heads are large, flat, and quite solid, weighing from eight to ten pounds each. Pkt. 10 cts., oz. 30 cts., ¼lb. 75 cts., lb. \$2.50.

BURPEE'S ALLHEAD. Heads a little larger and deeper than Early Summer. A select, uniform, sure-heading strain. About ten days later than Jersey Wakefield. Fine for winter if sown late. Pkt. 10 cts., oz. 30 cts., ¼lb. 75 cts., lb. \$2.50.

SUCCESSION. A second-early drumhead variety which is a sure header under all conditions and at all seasons. A little later than Allhead but considerably larger. Pkt. 10 cts., oz. 30 cts., ¼lb. 75 cts., lb. \$2.50.

PREMIUM FLAT DUTCH. One of the best winter Cabbages for the home-garden or market. A heavy yielder, producing large, heavy, flat heads which keep well until late in winter. Pkt. 10 cts., oz. 30 cts., ¼lb. 75 cts., lb. \$2.50.

HOLLANDER, or Short-Stem Danish Ballhead. Introduced from Denmark some thirty-five years ago, this Cabbage soon became and still remains the most popular and profitable variety for late market. The heads are of only medium size but round, deep, and solid as a bullet, exceeding all others in keeping quality. On strong lands it produces large tonnages and commands a good price even when others are not salable. Not recommended for poor soil. Pkt. 10 cts., oz. 30 cts., ¼lb. 75 cts., lb. \$2.50.

PENN STATE BALLHEAD. A very superior Cabbage developed at Pennsylvania State College. The hard, tight heads weigh one-third more than ordinary heads of same size and are unusually good keepers. Matures in 130 days. Pkt. 15 cts., oz. 75 cts., ¼lb. \$2.25, lb. \$8.

RED CABBAGE

DANISH ROUND RED. A superior strain of Red Cabbage with very hard, perfectly round heads in which the deep color extends clear to the center. Fine for pickling and probably the best of the Red Cabbages, particularly on good soils. Pkt. 10c., oz. 40c., ¼lb. \$1.25, lb. \$4.

MAMMOTH ROCK RED. Heads flattened and very large. A reliable and popular Red Cabbage, well known with market growers. Pkt. 10 cts., oz. 35 cts., ¼lb. \$1, lb. \$3.

SAVOY CABBAGE

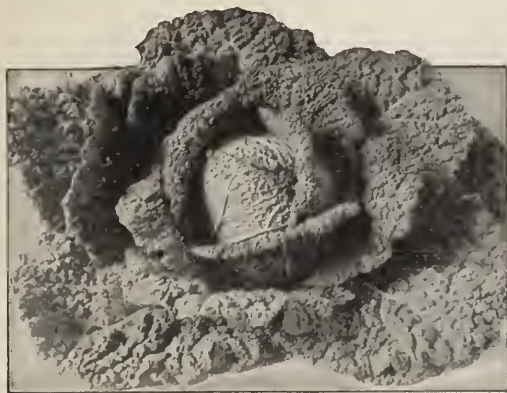
Savoy Cabbages are popular because of their rich flavor and late-keeping qualities. The leaves are curled and crinkled, and the heads are firm and solid. They are best late in the season after a heavy frost.

AMERICAN DRUMHEAD SAVOY. A vigorous, hardy variety with large, solid heads and few outer leaves. Pkt. 10 cts., oz. 30 cts., ¼lb. 75 cts., lb. \$2.50. (See illustration on page 11.)

AIRE. Extra early, with fine curled leaves and pointed head. Pkt. 10 cts., oz. 30 cts., ¼lb. 75 cts., lb. \$2.50.

CHINESE or CELERY CABBAGE

PE-TSAI. Produces heads which resemble giant cos lettuce, often 2 feet high and 6 inches or more in diameter. It develops best in the fall. Sow the seed the last of June or early in July, in shallow drills about 2 feet apart, and thin or transplant the seedlings to stand about 15 inches apart. The outer leaves may be used as a salad while the plants are growing and the heads, which are quite solid and beautifully blanched within, have a delicious flavor either as a salad or cooked like asparagus. Gardeners who have not yet tried this fine, easily grown vegetable should plan to sow a few rows of it this summer. It can be grown in the rows left vacant after the early spring crops have been harvested. Pkt. 10 cts., oz. 30 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.50.



American Drumhead Savoy Cabbage

in every garden. Always recognized as wholesome adjuncts to the diet, they have recently been found to be especially rich in the important vitamins, while no one who has eaten freshly pulled, tender, young Carrots will deny that they make one of the most delicious dishes the garden can supply.

The best crops are grown on soils that were well manured the previous season but good results can be obtained on any good garden soil, providing it is dug deeply and thoroughly pulverized. Freshly manured ground is to be avoided for it will produce split and misshapen roots. Sow the seed any time after the frost is out of the ground, in shallow drills 15 to 20 inches apart, covering it about an inch deep and pressing the soil down firmly over the seed.

When the seedlings are well up, thin them out, leaving them standing about 2 inches apart in the rows. Later on as they begin to reach the edible stage, they may be thinned again, so as to leave at least 4 inches between plants which are to remain until they attain full size. To insure a constant supply, make sowings every three or four weeks from late March to the end of June. Early June is a good time to sow the main crop for roots to be stored like beets for winter use.

An ounce of seed will sow about 100 feet of drill; 3 to 4 pounds are required to sow an acre

EARLY SCARLET HORN, BLUNT ROOT. A quick-growing variety which makes thick, blunt-ended roots about 3 inches long, deep reddish orange in color, and of excellent quality. A fine Carrot for early use and for forcing in frames. Tops small. Pkt. 10c., oz. 15c., $\frac{1}{4}$ lb. 35c., lb. 90c.

RED-CORED CHANTENAY. A new introduction of a rich orange color, decidedly deeper than the ordinary Chantenay. The cores are small and nearly the same color as the flesh. Roots grow to about 5½ to 6 inches long, are 2 to 2½ inches in diameter at the shoulder, and are broad at the bottom, often being 1¼ to 1½ inches just above the rat-tail.

The outstanding features are the smoothness and refinement of the roots, the excellent color of both the exterior and interior, and the very uniform and perfect stumping. Roots are very uniform in size and appearance, and a little earlier in maturity than ordinary Chantenay. The surface of the root is smooth and free from large eyes and side rootlets. Tops are shorter and the foliage finer cut than ordinary Chantenay. Pkt. 15 cts., oz. 30 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.

DANVERS HALF-LONG. The most popular Carrot for the main crop, being a reliable, heavy-yielding variety of excellent quality and attractive appearance. The roots are smooth, nearly cylindrical, bluntly pointed, and in good soil will attain a length of 6 to 8 inches. The skin and flesh are bright orange-red, fine-grained and tender. Market-gardeners find it an ideal variety for bunching and it is a splendid winter keeper. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 90 cts.

CHANTENAY. Grows more quickly than Danvers and the roots are shorter but broader at the top, tapering to an abrupt point. It produces heavy yields on comparatively shallow soils. Chantenay is largely grown by market-gardeners and is a splendid main-crop Carrot for the home-garden. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 90 cts.

HALF-LONG LUC. A French variety of the Danvers type, noted for its superior quality. The

flesh is deep in color, very sweet and tender, and almost entirely free from core.

Danvers Half-Long Carrots

Not so hardy as other main-crop Carrots but will produce big crops on well-prepared soil. Pkt. 10c., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 90 cts.

ST. VALERY. A medium-long, tapering or pointed Carrot of fine quality; about 10 inches long and unusually smooth and symmetrical, deep reddish orange in color, and very attractive in appearance. Pkt. 10c., oz. 15c., $\frac{1}{4}$ lb. 35c., lb. 90c.

IMPROVED LONG ORANGE. A fine strain of the pointed type, producing large, tapering roots 12 to 14 inches long, smooth, bright orange in color and of good quality. On deep, mellow soils it will yield enormous crops. Besides being an excellent table Carrot, it is much planted for feeding to stock. Pkt. 10c., oz. 15c., $\frac{1}{4}$ lb. 35c., lb. 90c.

CARROTS

A little more particular as to soil than beets, but otherwise just as easy to grow, Carrots deserve a place



Pe-Tsai Chinese Cabbage



Improved Long Orange Carrots



Golden Evergreen Sweet Corn

SWEET CORN

One quart of seed will plant 200 to 300 hills or 300 feet of row; 6 to 8 quarts will plant an acre

The one vegetable which every American gardener wants to grow is Sweet Corn, and, fortunately, it is one of the easiest to grow, thriving on most all soils and requiring only a minimum of attention. Since the seed is rather tender, do not make the first sowing until the soil is warm and comparatively dry—the middle of May is usually the earliest it is safe to sow Corn in this section. It can be grown in hills or in rows, the latter method being usually preferred. Hills are placed 2 to 3 feet apart each way, dropping about six seeds in each hill and, when the plants are about 8 inches high, pulling out all but the three or four strongest. Rows are spaced $2\frac{1}{2}$ to $3\frac{1}{2}$ feet apart and the plants thinned to stand 12 to 15 inches apart in the rows. Generally speaking, the late varieties grow larger and require more room than the early sorts. In planting, cover the seed about 2 inches deep, or a little deeper if the weather is very dry. Growing Corn requires lots of water. To preserve all the moisture in the soil and, incidentally, keep down weeds, hoe or cultivate frequently, taking care, however, not to go too deep as Corn roots spread out close to the surface. In order that the ears may develop perfectly they must receive plenty of pollen from near-by stalks; consequently, it is always best to plant Sweet Corn in several short rows, side by side, rather than in one or two long rows. Many gardeners plant only one or two quick-maturing varieties, securing a continuous supply by making sowings every ten days or two weeks from mid-May to early July. Others follow the plan of sowing, all at one time, a number of sorts which will mature in succession. If you want to enjoy Sweet Corn far sweeter and richer than any you have ever been able to buy, grow it yourself and pick it just before it is to be cooked.

BURBANK'S BANTAM. Stalks usually grow to a height of $4\frac{1}{2}$ to 5 feet. The ear is 7 to 8 inches long, has 12 to 16 rows, and matures for table use in 65 to 70 days. It has the original Golden Bantam flavor and is about a week earlier. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.50, bus. \$9.

GOLDEN SUNSHINE. An improvement on Golden Bantam in that the ears are an inch longer, 12-rowed instead of 8-rowed, and it matures about 10 days earlier. It is an attractive golden yellow and equal in quality to the later varieties. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.50, bus. \$9.

GOLDEN EARLY MARKET. This variety was introduced several years ago and has met with very much favor among the market-gardeners. It is about as early as Golden Sunshine, with 8- to 12-rowed ears 6 to 7 inches long. Stalks about 5 feet high, quite sturdy in habit, and ears form close to the stalk and upright. An outstanding early yellow variety. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.50, bus. \$9.

WHIPPLE'S EARLY YELLOW. Ears about twice the size of Golden Bantam, 12- to 16-rowed, of very fine quality. Matures in about 85 days. $\frac{1}{2}$ pt. 15c., pt. 25c., qt. 40c., pk. \$2.25, bus. \$8.

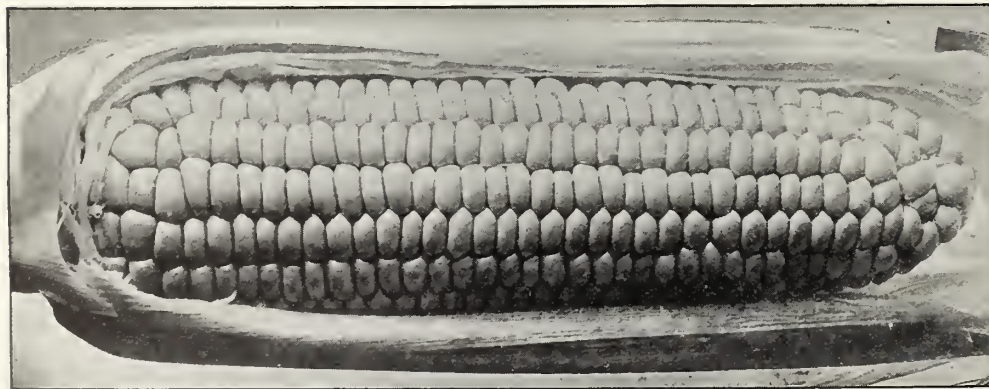
GOLDEN BANTAM. The delicious little golden yellow ears are known wherever Sweet Corn is grown. It is one of the quickest to mature its crop, and, since the seed is hardy and can be planted a week or so earlier than other sorts, it can always be depended upon to supply the first true Sweet Corn of the season. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2, bus. \$7.

DELUE'S GOLDEN GIANT. Undoubtedly the finest Sweet Corn now in cultivation! The result of many years of rigorous scientific breeding, it is as sweet, tender, and rich in flavor as the famous Golden Bantam, practically as early, more productive, and much larger. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

BARDEN'S WONDER BANTAM. An excellent variety for home or market growers. Large yellow deep grains. Ears a third larger than Golden Bantam, often 8 to 10 inches long. Stalks 5 to 6 feet high. Early as Bantam and equal if not superior in quality. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

GOLDEN EVERGREEN. A fine, large-eared, deep-grained yellow Sweet Corn, produced by crossing Golden Bantam and Stowell's Evergreen. A midseason Corn that remains tender and sweet for a long time after it reaches full size. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

GOLDEN CREAM. The result of a cross between Golden Bantam and Country Gentleman. It is about the same size as Bantam but later, and has the irregular or "shoe-peg" kernels of Country Gentleman. Deep creamy yellow; extra-fine quality. $\frac{1}{2}$ pt. 15c., pt. 25c., qt. 40c., pk. \$2.25, bus. \$8.



DeLue's Golden Giant Corn

Protect your Corn with Stanley's Crow Repellent. See page 70

SWEET CORN, continued

EARLY MAYFLOWER. The earliest white Sweet Corn that produces an ear of good size and quality. Medium in growth, productive and hardy, bearing ears 7 inches long with 8 or 10 rows of broad, tender, pure white kernels. Fine for first early. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.50, bus. \$9.

PREMO. Long, slender, 8-rowed ears with short, broad grains, very sweet and tender. A little later than Peep o' Day. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

FORDHOOK. About a week later than Mayflower, with large, 8-rowed ears. Cob small; grains broad and deep; quality fine. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

KENDEL'S EARLY GIANT. One of the most popular of the medium-early white Sweet Corns for market. Ears 8 to 9 inches long and 12-rowed, of good quality and very productive. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2, bus. \$7.

HOWLING MOB. Undoubtedly the finest of the medium-early varieties, unusually large for so early a sort and not surpassed in quality by any other white Sweet Corn. It comes in about 12 days after Mayflower. The best second-early Sweet Corn for the home-garden and extensively planted for market. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

EARLY CHAMPION. Ready for use about the same time as Howling Mob; ears large, 14- or 16-rowed, well filled with large, broad grains of good quality. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2, bus. \$7.

WHIPPLE'S EARLY WHITE. Matures about a week later than the small extra-early sorts. Ears 8 to 9 inches long with 16 or 18 rows of pearly white and sweet grains. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

EARLY EVERGREEN. An early selection of the old standby, Stowell's Evergreen. A vigorous, productive strain, not quite so tall but several days earlier than Stowell's, bearing large ears of typical Evergreen type and quality. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2, bus. \$7.

SCOTT'S EARLY PERFECTION. Introduced by us more than twenty years ago, this variety has grown in popularity every year it has been in cultivation. As an early main-crop white Sweet Corn it has no superiors for either home or market use. It follows close after Howling Mob. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

EARLY MAMMOTH. The earliest of the so-called Mammoth varieties. Coming in with Early Evergreen, it produces heavy ears 9 inches long with very broad grains of delicious quality. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

COLUMBUS MARKET. One of the best main-crop market varieties. A shade earlier than Stowell's Evergreen, with ears 10 to 12 inches long, 14-rowed; grains pure white, large and deep, very sweet and tender. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

STOWELL'S EVERGREEN. The old, reliable, ever-popular late variety. The ears are 8 to 10 inches long with 16 or 18 rows of very deep, sweet kernels. It remains tender and sweet for a long time. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2, bus. \$7.

WHITE EVERGREEN. An exceptionally sturdy and productive strain of Stowell's, bearing a slightly larger, broader ear and broader, whiter grain. Of high quality and perhaps the best for canning. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2, bus. \$7.

LATE MAMMOTH. The largest of all Sweet Corns and one of the very finest in quality. Ears often 12 inches long, deliciously sweet. A week or ten days later than Evergreen. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

COUNTRY GENTLEMAN. The favorite main-crop Corn with many gardeners, on account of its fine rich flavor. The ears are 7 to 8 inches long with long, narrow kernels set densely and irregularly on a very small cob. Often called "Shoe-Peg." $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.50, bus. \$9.

BLACK MEXICAN. The ears are of good size with broad kernels which are bluish white when they reach the edible stage and turn violet when cooked. Not desirable for market on account of its color but its distinct flavor makes it a great favorite for the home-garden. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

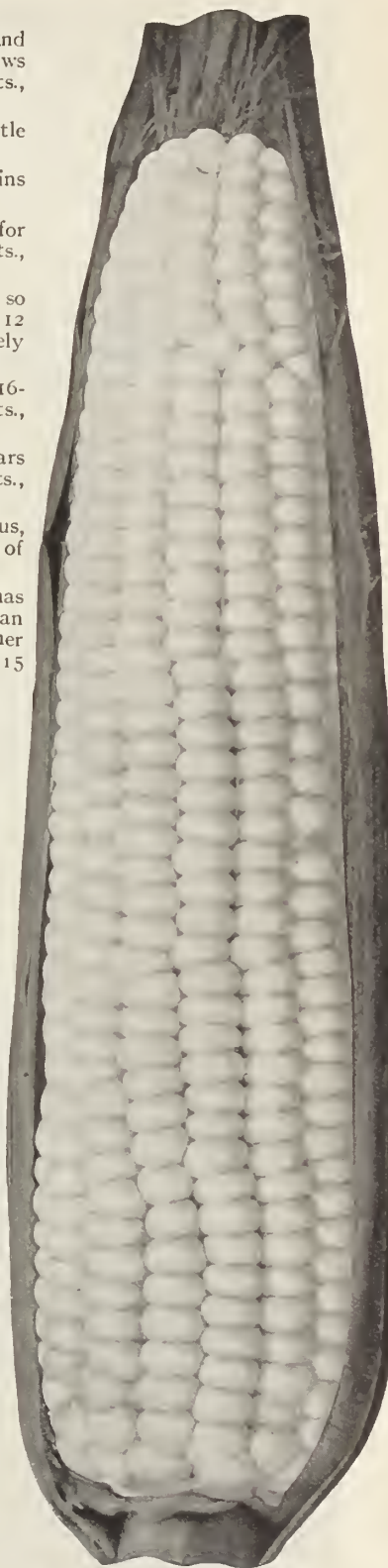
EXTRA-EARLY ADAMS. Not a true Sweet Corn but extremely hardy and early. It thrives in weather too cold and wet for other varieties, so may be planted earlier and grown in climates where true Sweet Corn does not mature. Often planted for first market. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2, bus. \$7.

POP-CORN

WHITE RICE. The most popular sort for general use. Productive; popping quality excellent. Prices shelled, lb. 15 cts., 2 lbs. 25 cts. By mail, lb. 23 cts., 2 lbs. 35 cts.



Scott's Early Perfection

Late Mammoth
Large ears, very sweet and tender

CAULIFLOWER

Rich soil, plenty of moisture, and cool weather at the time of heading are required to grow good Cauliflower. In this part of the country it is advisable to time the sowing so that the plants will mature either before the hot, dry days of midsummer or in the fall. Sow the seed and treat the young plants exactly as you would cabbage, starting the spring crop in flats indoors or in the hotbed early in February and transplanting to the garden in May after danger from frost is past. Sow for fall crop in coldframe or seed-bed in May and transplant in July. When you set the plants out, space them about 1½ feet apart in rows 2 feet apart, digging in plenty of manure if it is available. When the plants show signs of heading, water them freely. Finally, when the heads are about 2 inches in diameter, tie the outer leaves loosely together over the top with a soft twine, to protect them from the sun and blanch them white.

An ounce of seed will produce about 2,000 plants

SELECT EARLY SNOWBALL. Extra-early and generally considered to be one of the surest headers. It produces deep, solid heads of medium size, pure white, and of fine quality. Being compact in growth, with small outer leaves, the plants can be set close together. Forces easily and is often grown in greenhouse or frames. Snowball is the most popular Cauliflower with the commercial growers and is for either early or late crop in the home-garden. Pkt. 40 cts., ¼oz. 75 cts., oz. \$2.50, ¼lb. \$8, lb. \$30.



Select Early Snowball Cauliflower

DANISH GIANT, or Dry Weather. A little later than Snowball and the plants are larger. Preferred in some sections because it will grow and head during dry weather. Pkt. 40 cts., ¼oz. 75 cts., oz. \$2.50, ¼lb. \$8, lb. \$30.

CUCUMBERS

A dozen or so good, strong plants on well-dug, moderately rich soil will produce all of the pickles and slicing Cucumbers the average family will want. For an extra-early crop, start indoors or in a frame about April 1, sowing the seed in paper pots or dirt-bands or on the bottom of inverted sods, and transplant to the garden the latter part of May, moving sod and all in order to disturb the roots as little as possible. Sow the main crop directly in the garden late in May, and, for a continuous supply, make additional sowings every two weeks up to the middle or latter part of July. For a special crop of pickles, sow seed about July 1. Before setting out the plants or sowing seed in the garden, prepare hills 4 to 6 feet apart, digging up the soil to a depth of a foot or more and mixing in plenty of manure or compost. Cucumber roots grow deep and are not much benefited by surface fertilizing. If the soil is stiff and heavy it will be improved by the addition of sand as well as manure. Leave the soil in the hills loose and a little higher than the general level of the garden. Sow eight to ten seeds in each hill and when the plants come up, thin out all but the strongest three or four. Do not disturb the vines after they have started to spread. Pick the fruits as fast as they become ready for use in order to keep the vines bearing for a long period. If the striped beetles interfere with the development of the young plants, give them a dose of bordeaux-arsenate of lead or tobacco dust.

An ounce of seed will plant about fifty hills; 2 pounds of seed will be required for an acre

DAVIS PERFECT. One of the best all-round Cucumbers in cultivation, for many years a favorite with home and market-gardeners alike. It is a dependable producer of very long, slender fruits which are rich dark green color and of finest quality. It is a good shipper and holds its deep green color for a long time. Well adapted for greenhouse culture; medium early. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.

IMPROVED EARLY WHITE SPINE. Extra early and prolific. Produces medium-sized, light green fruits of fine quality for slicing. Good for pickles also, and a popular sort for the home-garden. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.

KIRBY STAYGREEN. The earliest White Spine variety. Handsome fruits 7 to 8 inches long, of a beautiful dark green color. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.



Improved Early White Spine Cucumber

EARLY FRAME, or Short Green. Fruits about 6 inches long, straight, tapering at both ends, and a little inclined to be three-cornered rather than round. Good for pickling and slicing. Pkt. 10 cts., oz. 15c., ¼lb. 40 cts., lb. \$1.

HEINZ PICKLE. Dependable plant, bearing excellent crops of well-formed fruits when other varieties fail. The Cucumbers are blunt at both ends, deep russet-brown, and get large when mature. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.

SPRAY CUCUMBERS WITH PYROX. See page 76

CUCUMBERS, continued

EARLY FORTUNE. A highly bred variety of the White Spine type. The vines are vigorous, producing big crops of handsome, long, slender fruits, deep green in color and exceedingly uniform in size and shape, with crisp, firm flesh and few seeds. Early, fine for slicing and one of the best for market. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

EXTRA-LONG, or Evergreen White Spine. A selection from the standard White Spine type, producing fruits 10 to 12 inches long, dark green in color, smooth, and of splendid quality for slicing. Good for late crop and for greenhouse forcing. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

BENNETT'S WHITE SPINE, IMPROVED. A medium-early, very productive variety which bears handsome, dark green fruits, very uniform in shape and size, about 8 inches long, thick through and blunt ended. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

COOL AND CRISP. An early strain of the White Spine type. Fruits about 8 inches long, thick at the middle but tapering off at the ends; light green in color; quality good. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. 90 cts.

KLONDIKE. A medium-early strain of White Spine Cucumber, notable chiefly for its unusually dark green color which it holds for a long time even under the hottest sun. Fruits of good size and shape. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

FORDHOOK FAMOUS. An exceptionally vigorous sort, bearing for a long season. The fruits are of giant size, often 15 inches long, thick through and slightly tapered at the ends, dark green in color and with crisp, solid flesh and few seeds. An ideal home-garden salad Cucumber. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

CLARK'S SPECIAL. A very attractive, dark green Cucumber, uniform in length (8 to 10 inches), and smooth in appearance, having very few white spines. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

LONG GREEN TURKEY. One of the best for pickles and useful for slicing as well. Late but very productive. The fruits when full grown are 14 to 16 inches long, straight and slender, slightly warted, dark green with crisp white flesh. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.



Davis Perfect Cucumbers

EXTRA-LONG JERSEY PICKLING. Extensively grown for large pickles. The fruits are slender and tapering, growing 6 inches long, medium green in color. Extremely prolific. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. 90 cts.

GREEN PROLIFIC, or Boston Pickling. For small pickles. Produces short, thick, bright green fruits, smooth and symmetrical. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. 90 cts.

EVERBEARING. Quite similar to Early Frame, but later, more prolific, and bears for a longer season. Largely grown for pickles. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

LIVINGSTON'S EMERALD. Fruits of good size, remarkably smooth and free from spines, and bright green in color. The vines are vigorous, commencing to bear when quite small. Excellent for small pickles and the ripe fruits make fine sweet pickles. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. 90 cts.

JAPANESE CLIMBING. A good Cucumber for the small garden as the vines can be trained on fence or trellis; in fact, it requires some sort of support. Fruits long and thick, crisp, tender and of fine quality. If kept picked the vines will bear freely all season. Pkt. 10 cts., oz. 20c., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

WEST INDIA GHERKIN, or Bur. Used for pickles. The vines are luxuriant, bearing quantities of small, nearly round fruits, light green and covered with spines. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 60 cts., lb. \$2.

CHICORY

Witloof Chicory

The large-rooted variety is grown for its roots, which may be cooked and served like turnips and they are sometimes dried and used to adulterate coffee. The Witloof variety is highly esteemed as a winter salad, for which purpose the plants are taken up in the fall, cut back nearly to the top of the root, and then covered with soil in a box or trench in a warm cellar. The new leaves, which grow from the old roots in about a month's time, are nearly white, crisp, and of a fine, piquant flavor. Sow Chicory seed in April or May, in shallow drills, and thin the plants to stand 4 to 6 inches apart.

An ounce will sow about 100 feet of drill

LARGE-ROOTED. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 45 cts., lb. \$1.35.

WITLOOF. Sometimes called French Endive. Pkt. 10c., oz. 20c., $\frac{1}{4}$ lb. 45 cts., lb. \$1.35.

COLLARDS

GEORGIA, or Southern. Largely grown for "greens" in the southern states. Produces a large cluster of tender leaves at the top of its long stem. Sow late in the spring and give the plants plenty of room to develop. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

CORN SALAD

A hardy, quick-growing plant, popular as a substitute for lettuce in late fall and early winter. Sow the seed early in the fall, in shallow drills, and give plenty of water. Late plants, covered with a light mulch of straw or leaves, will be suitable for use in early spring. *An ounce of seed sows about 100 feet of drill.*

LARGE-SEEDED. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

CRESS (For peppery salads and garnishes)

FINE-CURLED PEPPER GRASS. Sow the seed any time from early spring on. It need not be grown in rows and requires no thinning. The leaves can be cut several times before the plants begin to form seed. Make sowings every week or ten days, a small patch at a time, for a continuous supply. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

WATER CRESS. (True.) Grows in damp places. Sow the seed in shallow water along the bank of a stream. No further care is required after sowing. Pkt. 15 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

DANDELION

The cultivated form is much larger and heavier than the common wild Dandelion. If the leaves are tied together, the center of the plant will blanch as white and clear as endive. Sow the seed early, in shallow drills, in rich soil, and thin the plants to stand about 1 foot apart. Cultivate frequently and keep out weeds. *An ounce of seed will sow about 100 feet of drill.*

IMPROVED FRENCH. Pkt. 20c., oz. 75c., $\frac{1}{4}$ lb. \$2.25, lb. \$8.

CELERY

Celery is an aristocrat among the garden vegetables—one of the crops the real gardener boasts about. Yet it is by no means so hard to grow as many people think. And home-grown Celery is certainly worth a lot of trouble. In the first place, Celery wants plenty of fertilizer—enrich the spot where you are going to grow it with manure, humus, or rich compost, or if you lack these, with a commercial fertilizer high in nitrogen. On heavy clays, manure or humus is particularly needful. Celery seed is rather slow and irregular in sprouting. For early crops sow indoors or in a hotbed about March 1, barely covering the seed with soil. When the seedlings are 2 to 3 inches high, thin them out or transplant them $1\frac{1}{2}$ to 2 inches apart. "Harden" them by exposing to the air more and more as the season progresses and by the end of May they should be ready to go out in the garden. For winter Celery, sow seed in a coldframe or sheltered spot in the garden about mid-April and reset in the trenches about July 1. It is a good plan to cut off the tops of the plants when they are 4 or 5 inches high to make them more stocky.

When ready to transplant to the garden, dig the soil deeply, pulverize it thoroughly, and then make trenches about 6 inches deep and 6 inches wide at the bottom, spacing them 3 to 5 feet apart. Set the plants 6 to 8 inches apart in the bottom of the trenches, firming the soil about them. Do not work around the plants or permit dirt to get on the leaves when they are wet. Commencing when the plants are about half-grown, fill in the trenches and pull dirt up around them gradually, until finally all but the top leaves are covered, but be careful not to let dirt get into the heart. This process not only blanches the stalks and heart but brings out the rich Celery flavor. The same result may be secured by the use of paper Celery bleachers or by placing boards, 10 to 12 inches wide, against the plants on either side. For winter use store in the cellar or leave banked up in the trenches, cover with straw or loose litter to prevent freezing and with boards on top to keep out rain.

An ounce of seed will produce 3,000 plants; one-half pound is required for an acre

EASY BLANCHING. An ideal Celery for the home-garden and a leading variety for market, combining hardiness, early maturity, and good keeping quality with ease of blanching and fine flavor. The stalks are of medium height, thick through, and brittle; the heart is heavy, blanching quickly to a clear light yellow. Less liable to blight than other sorts, and good for both early and late crop. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

GOLDEN SELF-BLANCHING. One of the finest early Celeries in cultivation; a favorite for early market. It is rather low and compact in growth, with thick, round stalks and heavy heart, blanching easily to a rich golden yellow. In flavor and quality it is unsurpassed. Our stock is from a superior strain of French-grown seed. Pkt. 10 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

GOLDEN PLUME or WONDERFUL. A new Celery, resembling Golden Self-blanching in crispness and flavor, but much larger and ranker in growth, blanches quicker and matures earlier. It is also more blight-resistant than Golden Self-blanching. Pkt. 15 cts., oz. 75 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

WHITE PLUME. A very early, easily grown variety with tall, handsome stalks which blanch quickly to a silvery white. A favorite. Pkt. 10 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

GOLDEN PHENOMENAL. A new variety introduced recently and very highly recommended by Celery growers. The general characteristics are

those of Golden Plume, but it is decidedly taller, and the stalks are much longer to the joint. They usually grow 27 to 28 inches over all, and from 8 to 9 inches to the joint. The season for planting and maturity is the same as Golden Plume. Plants are heavy, compact, and full-hearted. The stems are broad and thick, brittle and free from strings, of fine flavor, and of excellent quality all through. Pkt. 15 cts., oz. \$1.50, $\frac{1}{4}$ lb. \$5.

GIANT PASCAL. A fine, late Celery with broad, thick, heavy stalks of superb nutty flavor; blanches yellowish white. A good winter keeper, retaining its flavor and crispness in storage. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

FORDHOOK. A distinct variety of remarkably fine quality. Stalks smooth, entirely free from stringy fibers, and $1\frac{1}{2}$ inches through when cut. Blanches pure white but heart has a tinge of light, buttery yellow. Unsurpassed in its crisp, nutty flavor. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

WINTER QUEEN. Another late sort of strong, compact growth; solid and excels in keeping quality. Medium in height with thick, brittle stalks. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

CELERIAC or TURNIP-ROOTED CELERY

The roots—not the stalks—are the edible portion of this plant. They are used for flavoring soups and in stews, in place of Celery or celery seed, and are also cooked or used as a salad. Grown like Celery but does not require blanching.

LARGE PRAGUE. A productive variety with large, round, smooth roots, free from side shoots. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.



Golden Plume or Wonderful Celery



Celeriac



Black Beauty Eggplant

thin the plants to stand 10 to 12 inches apart and when full grown, tie the tips of the outer leaves together over the center of the plant (when the leaves are dry), to blanch the heart, which will take about a week's time.

GREEN CURLED. The hardiest and most vigorous kind. The plants are large and handsome, with finely cut and fringed, dark green leaves. The heart blanches easily to clear white. Quality fine. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

WHITE CURLED. Foliage is a little finer than the Green Curled and the inner leaves become creamy white without blanching. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

BROAD-LEAVED (ESCAROLLE). The leaves are broad and quite thick and heavy, slightly twisted and scalloped. Medium green in color, blanching readily, and of good quality. Used as a winter salad and also cooked like spinach. Pkt. 10c., oz. 20c., $\frac{1}{4}$ lb. 50c., lb. \$1.50.

LARGE CURLED PANCALIER. A vigorous grower with thick curled leaves and red ribs. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

KALE (Borecole)

Makes delicious "greens" for fall and early spring use. For the fall crop, sow seed in May in shallow drills and thin or transplant to stand about 2 feet apart each way. Cultivate like cabbage. Light frosts will not injure Kale but, on the contrary, improve its flavor. For early spring use, sow in September and protect over winter.

An ounce will sow about 300 feet of drill; 4 pounds will sow an acre

DWARF CURLED SCOTCH. Extremely hardy and fine for early winter use. Grows 15 to 18 inches high and produces a heavy crop of beautifully curled, bright green leaves, tender and of fine flavor. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

TALL CURLED SCOTCH. Like the dwarf form but grows about 2½ feet high. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

MOSS CURLED. A more compact, curlier variety of Scotch Kale, making a handsome appearance in market and of high culinary quality. We recommend it. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

DWARF GERMAN. Low and compact in growth, with finely curled, yellowish green leaves. Nice for garnishing. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 90 cts.



Early White Vienna Kohlrabi

EGGPLANT

An ounce of seed will produce about 1,000 plants

Eggplant is a warmth-loving vegetable, growing best in a light, mellow, well-enriched soil. Since it requires a long growing season and plenty of heat at the time the fruits are developing, it is necessary to start the seed in March, in hotbeds or boxes indoors. Push the seedlings along with plenty of light, heat, and moisture, and when they are about 3 inches high, transplant them to 3- or 4-inch paper pots or dirt-bands. Early in May, commence to "harden" the plants gradually, by exposing them to the air on warm days, but protect them carefully from chills and drafts at all times. Set them out in the garden about June 1, spacing them 2 to 2½ feet apart each way. Disturb the roots as little as possible in transplanting, and water freely.

NEW YORK IMPROVED SPINELESS. A very productive sort, bearing large, smooth, dark purple fruits of good size and quality, six to eight fruits to the plant. Pkt. 10 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.25, lb. \$5.

BLACK BEAUTY. A favorite in home-gardens; a week to ten days earlier than the preceding. Fruits are of enormous size, smooth, purplish black in color and of fine quality. Pkt. 10 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.25, lb. \$5.

ENDIVE

An ounce of seed will sow 150 feet of row; 3 pounds will sow an acre

An appetizing and healthful salad which is grown principally for fall and early winter use, as the plants are hardy and develop perfectly in cool weather. Sow the seed any time from early April to the end of July, the best results being usually obtained from late June or early July sowings. Plant in shallow drills about 15 inches apart and



Green Curled Endive

KOHLRABI

Sometimes called Turnip-Rooted Cabbage. Sow the seed in shallow drills in April, or for extra-early crop start in the hotbed in March. Thin or transplant the plants about 6 inches apart. Kohlrabi grows rapidly and should be used when about half-grown, 2 to 2½ inches in diameter. For a continuous supply make sowings every ten days up to the middle of July.

An ounce of seed will sow about 250 feet of drill

EARLY WHITE VIENNA. The quickest growing and most popular kind for table use. Leaves few and small; bulbs of medium size with white skin and flesh, tender and of delicate flavor. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.50.

EARLY LARGE PURPLE. A little later and larger than the White Vienna, and a reliable sort. Skin purple; flesh white. Pkt. 10c., oz. 25c., $\frac{1}{4}$ lb. 75c., lb. \$2.50.

LARGE GREEN. Generally used for stock-feeding. Produces large bulbs with greenish white skin; rather tough when full grown but suitable for table use when small. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 65 cts., lb. \$2.

LETTUCE

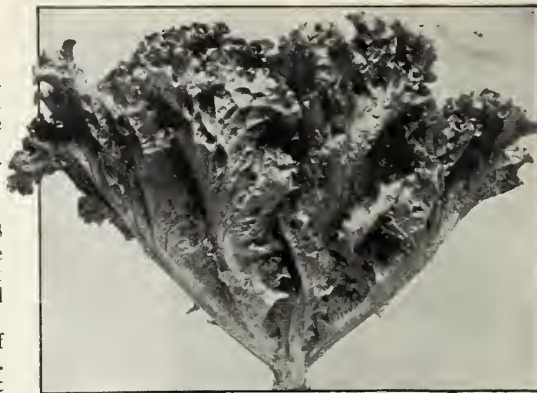
By starting seed for the first crop in the hotbed or in flats in the house in February or early March, and by carefully choosing varieties which will furnish a succession of crops in the garden, one may have fresh Lettuce for the table from May to November. Make the first sowing outdoors as soon as the ground can be put in shape, making the seed-bed as fine and mellow as possible. Scatter the seed in shallow furrows at least 15 inches apart, and cover lightly. As soon as the plants are big enough, thin them out to stand 3 to 4 inches apart. Then, when they begin to touch each other in the row, use alternate plants, leaving 8 to 12 inches, depending on variety, for the remainder to develop. Cultivate constantly. Remember that prompt thinning to provide room and frequent cultivation are the two great essentials in growing good Lettuce. An occasional sprinkling of nitrate of soda will pay in producing earlier and better crops.

The quickest and easiest Lettuces to grow are the non-heading Loose-leaf or cutting varieties. They are generally preferred for the first sowing outdoors. The Butterhead sorts are second in earliness but first in quality. They do not thrive in hot, dry weather. Use Butterhead varieties for your indoor sowing and for early spring sowing outdoors to succeed the quicker maturing Loose-leaf sorts. They may also be sown in August or early September to mature in the fall. The Crisphead Lettuces require a longer season to mature but are valuable for their comparative resistance to hot weather. Sow these to follow the Butterheads. The Cos or Romaine Lettuces are slow growers but are particularly resistant to heat and drought.

GRAND RAPIDS. An extremely early Loose-leaf variety, requiring cool weather for its proper development. Grown in greenhouses for winter market. Also good for first spring crop in the garden. The plants are large and handsome, with bright green, curled and crinkled leaves. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.25.

EARLY CURLED SIMPSON. An early, medium-large Loose-leaf Lettuce with yellowish green, crumpled and frilled leaves of excellent quality. A splendid early garden Lettuce. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50c., lb. \$1.25.

BLACK-SEEDED SIMPSON. One of the most reliable and productive of the Loose-leaf sorts. The plants are large, with broad, beautifully crumpled and frilled leaves, light green in color and of good quality. Stands more heat than others of its class and is, consequently, desirable for late sowings. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.



Grand Rapids Forcing Lettuce



Big Boston Lettuce



Improved Hanson Lettuce

THE MORSE. A Loose-leaf type but compact in growth, making a sort of loose head, with outer leaves light green and heart blanching light yellow. The plants are large and vigorous. Sometimes used for forcing and good for early crop outdoors. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

IMPROVED HANSON. Crisp-head type, although it does not make a solid head under ordinary conditions. The plants are of good size; outer leaves medium green, somewhat crinkled; inner leaves blanching white. It grows well in hot weather and remains in good condition for a long time before going to seed. A dependable summer Lettuce. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

GOLDEN CURLED. A very handsome, loose-heading Lettuce with greenish yellow, crinkled and frilled leaves.

Medium size; crisp and tender. Stands warm weather well and is slow to shoot to seed. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

BROWN CHARTIERS. Similar to the preceding but the leaves are tinged with brown. Neither Chartiers nor Golden Curled is recommended for forcing. Pkt. 10c., oz. 20c., $\frac{1}{4}$ lb. 50c., lb. \$1.50.

CRISP-AS-ICE. A popular Lettuce of the Crisphead type which makes a solid head of medium size. Being unusually hardy, it is desirable for fall sowing. The outer leaves are dark bronzy green, crumpled and heavy in texture; inner leaves creamy yellow, crisp and sweet. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.50.

WHITE PARIS COS, or Romaine. Distinguished by its tall, upright growth, with long, narrow leaves. The heads are compact and can be blanched to clear white by tying the outer leaves together at the top. Cos Lettuce can be grown in the hottest weather and, when properly blanched, it is crisp, tender, and of excellent flavor. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

ICEBERG. A fine variety for the home-garden. Crisphead type, making a very large, solid head even in warm weather. Outer leaves light green, tinged with brown at the edges; inner leaves white, crisp, firm and sweet. Pkt. 10c., oz. 20c., $\frac{1}{4}$ lb. 50c., lb. \$1.50.

NEW YORK, or Wonderful. The most largely grown of the Crisphead Lettuces. It grows slowly but makes a fine heavy head and remains in prime condition for several weeks. The outer leaves are dark green, the inner blanch to creamy white. Known on the markets as "California Ice Lettuce." Pkt. 10c., oz. 30c., $\frac{1}{4}$ lb. 90c., lb. \$2.50.

Lettuce continued on next page

LETTUCE, continued

MAY KING. An early Butterhead Lettuce of superb quality, and an ideal sort for early spring planting. If grown in cool weather and given ample room and cultivation, it will make very solid heads of medium size, with light green outer leaves and rich golden yellow hearts. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

BIG BOSTON. Where conditions are favorable, Big Boston is a most dependable producer of very large, compact heads of rich buttery quality. It is a favorite with market-gardeners, particularly in the South, but will not ordinarily "head up" for the home-gardener unless it is started indoors or sown very early so as to mature before warm weather. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

BLACK-SEEDED BIG BOSTON. Similar to the original Big Boston which is white-seeded, but a little coarser in growth and stands longer before going to seed. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

LARGE SUMMER CABBAGE. A better warm-weather Lettuce than other Butterhead sorts. The heads are large, quite solid, medium green in color, blanching to creamy yellow in the heart, and of fine quality. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

MAMMOTH BLACK-SEEDED BUTTER. A fine outdoor Butterhead Lettuce, making a large, rather loose head of fine texture and flavor. Being quite resistant to heat and slow to seed, it is good for both early and second early crop. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

LEEK

This relative of the Onion is grown for its thick leaf-stalks, which resemble a giant young onion. Its pungent flavor is much appreciated by many people, and it is widely used for flavoring soups and stews. A light, moderately rich soil is required for best results. Sow the seed in shallow drills early in the spring and when the plants are about 5 inches high, transplant them 6 to 8 inches apart in rows 15 inches apart, and cultivate frequently. At the time of transplanting it is a good plan to cut back the plants about a third of their height. The stalks are best when blanched by drawing earth up around them.

An ounce of seed will sow 150 feet of row; 4 pounds will produce sufficient plants for an acre

LARGE LONDON FLAG. The hardest and most generally cultivated variety. Broad stalks of strong flavor. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.50.

MUSSELBURG. Grows larger and is milder in flavor than the preceding. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.50.

MUSKMELON

*An ounce of seed will plant about 50 hills;
2 to 3 pounds will plant an acre*

Melons grow best in a light, warm, well-enriched soil. Since they cannot be sown outdoors until warm weather, and require a long growing season, it is a good plan, in this part of the country, to start the seed in a hotbed or box indoors, using inverted sods or dirt-bands, as recommended for early cucumbers. Plant them in the garden, in hills 5 to 6 feet apart, digging the soil to a depth of a foot and mixing in plenty of manure or fertilizer with the bottom soil. In sections where the young plants are troubled with insect pests, it will be necessary to sow an excessive number of seeds with the idea of leaving enough plants to produce a crop after the bugs have done their worst. No more than three or four strong plants should be left in each hill. Hoe frequently at first, taking care not to injure the roots which run close to the surface, but do not disturb after the vines begin to spread.

EXTRA-EARLY HACKENSACK. A large, round melon, slightly flattened at the ends. The skin is ribbed and netted; the flesh is thick, light green in color, and of good quality. Matures earlier than the old type. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

HACKENSACK, or Turk's Cap. Larger and later than the preceding. Productive. An old favorite with market-gardeners. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

OSAGE, or Miller's Cream. A popular market melon, unusually productive and bears for a long season; does well on soils too heavy for other varieties. The fruits are large, slightly elongated, with lightly netted dark green skin and thick, firm, orange flesh of fine flavor. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

EMERALD GEM. An early, prolific melon. The fruits are small, decidedly flattened and deeply ribbed; the skin is dark green and the flesh is unusually deep and solid, bright orange in color clear to the rind, and of remarkably fine quality. Not a good shipping melon as it remains in good condition but a short time, but a great favorite for home-gardens on light soil. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

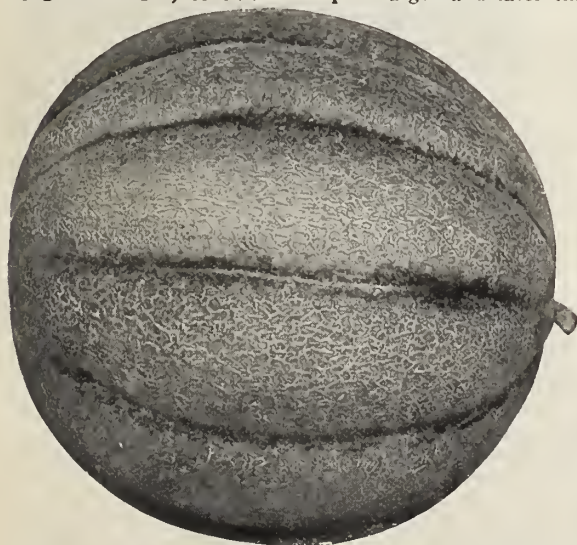
TIP-TOP. Probably the most dependable melon for this region. Medium early and productive, bearing large, round, ribbed and netted fruits with thick, sweet orange, flesh. A good market melon and does well on a variety of soils. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

ROCKY FORD. One of the finest quality melons in cultivation. The fruits are medium small, oval in shape, slightly ribbed and covered with a coarse, gray netting. Flesh green and remarkably sweet. Productive but requires a long season. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

HONEY DEW. This melon, recently introduced to American gardens, has come into great favor on account of its extraordinary sweetness. The fruits are very large, with thin, hard, smooth, pale green rind and thick green flesh which remains firm and crisp for a long time. Requires a long growing season. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.



Large London Flag Leek



Tip-top Muskmelon

DUST MELONS WITH HAMMOND'S SLUG SHOT. See page 79

WATERMELON

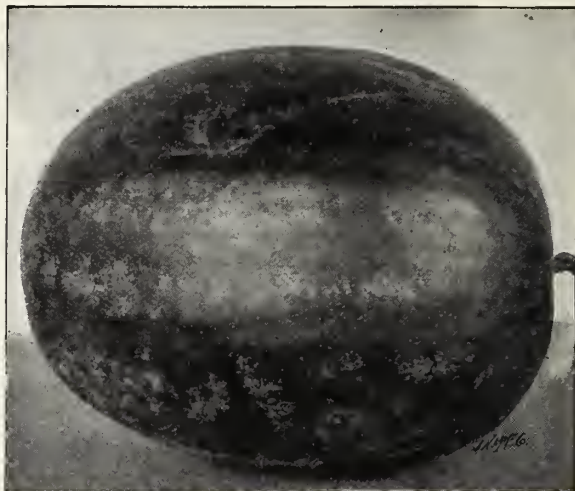
If you have a sunny, sheltered spot in your garden and are willing to take pains to give the plants a good start, you can grow the finest of Watermelons, even in this northern latitude. In general, Watermelons require the same treatment as muskmelons. Start the plants in a hotbed, if possible, to save time, for they require a long growing season. It is not safe to sow seed outdoors until the last of May. Prepare the hills carefully, spacing them 8 to 10 feet apart and digging them deep, mixing in each a couple of shovelfuls of manure or, if manure is not available, a little commercial fertilizer. Humus material of some kind will have to be added if the soil is heavy. Provide in the sowing for a surplus of plants since some of them are pretty sure to succumb to the attacks of insects. To protect the seedlings as much as possible, sprinkle them with arsenate of lead powder or tobacco dust. A top-dressing of manure will keep the soil in the hill warm and moist; water freely in dry spells. When the vines begin to run, pull out all but three or four of the strongest plants.

An ounce will plant about 20 hills; 4 pounds will plant an acre

TOM WATSON. This is the most widely grown variety, the standard market melon of the South. The vines are vigorous, bearing fruits 24 inches long and about 12 inches in diameter, with a thin, tough, mottled green rind and rich red flesh of good quality. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

KLECKLEY SWEETS. Leading all other Watermelons in sweetness, this is the ideal variety for home-gardens and local markets. The fruits grow about 20 inches long and 10 inches in diameter, with thin green rind and bright scarlet flesh which is deliciously crisp and juicy without a trace of fiber or stringiness. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

SWEETHEART. Earlier than the above and, for that reason, more suitable for northern gardens. Large, heavy fruits, more nearly round than the preceding varieties, with a thick, mottled light and dark green rind and firm red flesh. Ships and keeps well; quality good. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.



Sweetheart Watermelon



Mushrooms

CITRON

A form of melon used only for preserving as the flesh is not edible when raw. Citrons are grown in the same way as watermelons; they are prolific and not so particular as to soil. Home-preserved Citron is much superior to that handled in the stores in a dried or candied form.

RED-SEEDED. Flesh firm, with comparatively few seeds. Fruits round. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

GREEN-SEEDED. Also called "Colorado Preserving." Fruits large and oblong. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

HORSE-RADISH

MALINER KREN. The largest and most vigorous variety. Plant in early spring in rich, moist soil. Will produce a good crop in one season. Roots, 45c. per doz. (postpaid 55c.), \$2.25 per 100 (postpaid \$2.50), \$15 per 1,000.

MUSHROOMS

Anyone who has a cellar or dark room where the temperature can be kept at from 50 to 60 degrees, can grow Mushrooms of surpassing tenderness and flavor. We furnish special printed directions free with each order, or for 25 cents we will send, postpaid, an illustrated booklet on Mushroom culture which gives the latest improved methods of growing as well as full instructions for preparing for market and recipes for cooking.

SPORE-CULTURE MUSHROOM SPAWN, NORTHERN-GROWN. Pure and vigorous. In the form of compressed bricks, each of which will plant about 8 square feet of bed. Brick 30 cts., 10 bricks \$2.50, 50 bricks \$11, 100 bricks \$20. If wanted by mail, add 10 cts. per brick to cover postage; 3 bricks 15 cts., 5 bricks 20 cts.

MUSTARD

The young, tender leaves make piquant salads and are delicious as well as healthful as boiled "greens." Make frequent sowings during the spring months, commencing as soon as the ground can be prepared, in shallow drills 12 to 15 inches apart. Thin out to 10 inches between plants. Mustard can also be forced in frames or in the greenhouse during winter.

An ounce of seed will sow about 75 feet of drill

SOUTHERN GIANT CURLED. The plants grow 2 to 3 feet high, producing quantities of broad, succulent leaves which are handsomely curled and fringed. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

WHITE CHINESE. An improved form of the common White Mustard. Leaves broad and smooth, sweet and pungent in flavor. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

FORDHOOK FANCY. A dark green variety of robust growth, more curled on the edges than any other sort. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.



Mustard

ONION

The average home-gardener is satisfied to grow small green Onions for the table. They are easily grown from seed sown in fine, well-prepared soil early in the spring. The rows should be 12 to 15 inches apart and the seed covered with a little fine soil pressed down firmly above it. When the seedlings are 3 to 4 inches high, thin them out to stand about 2 inches apart. Cultivate frequently.

Growing Large Onions from Seed. Poor or heavy soil will not grow good crops of large Onions without the addition of considerable quantities of old rotted manure, humus, and commercial fertilizer; a rich sandy loam or muck soil gives best results. If possible sow seed in hotbeds early in February, thinning the seedlings enough to prevent crowding, and transplanting to the open ground early in May, spacing them 4 to 6 inches apart, depending on variety. If hotbeds are not available, sow the seed in the garden as early as the soil can be put in shape. Thin promptly and keep the hoe or cultivator busy early and late. Keep down the weeds by frequent hand-weeding, if necessary. When the bulbs begin to ripen or show signs of going to seed in the fall, bend over the tops but do not break them off. After digging, let the bulbs thoroughly dry in the sun before storing them away.

An ounce of seed will sow about 100 feet of row; 5 to 6 pounds will sow an acre



Southport White Globe Onions

Yellow Globe Danvers Onion



EXTRA-EARLY RED. A flat, medium-sized Onion with purplish red skin and white flesh of good but strong flavor. The earliest of the red Onions. Pkt. 10 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.10, lb. \$3.50.

LARGE RED WETHERSFIELD. The most popular large red Onion for home-gardens and northern markets. Similar in shape and color to Extra-Early Red, but larger and about two weeks later. Productive and an excellent keeper. Pkt. 10 cts., oz. 30 cts., $\frac{1}{4}$ lb. 90 cts., lb. \$2.50.

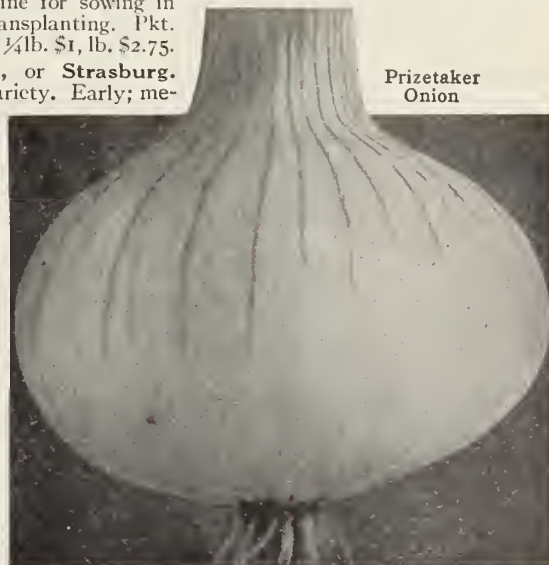
YELLOW DANVERS FLAT. Flat bulbs of good size, with thin necks, ripening down hard and keeping well. Skin is straw-yellow; flesh white, fine-grained and mild. Medium early. Pkt. 10c., oz. 30c., $\frac{1}{4}$ lb. 90c., lb. \$2.50.

YELLOW GLOBE DANVERS. The standard round Onion for eastern markets and probably the most popular all-purpose variety in cultivation. Productive and medium early; bulbs large, solid, nearly globe-shaped, with yellowish brown skin and pure white flesh, crisp, sweet, and mild in flavor. An excellent keeper and a very reliable Onion for home or market use. Pkt. 10 cts., oz. 30 cts., $\frac{1}{4}$ lb. 90 cts., lb. \$2.50.

PRIZETAKER. A fine selection of the giant Spanish Onion, which will, if planted early and given good cultivation, produce bulbs 4 inches or more in diameter. It makes handsome, uniform, globe-shaped bulbs with thin, pale yellow skin and mild, sweet, white flesh. Prizetaker is a splendid Onion for the home-garden and a good variety to grow for fall and early winter market. Fine for sowing in the hotbed and transplanting. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$2.75.

YELLOW DUTCH, or Strasburg. An old standard variety. Early; me-

Prizetaker Onion



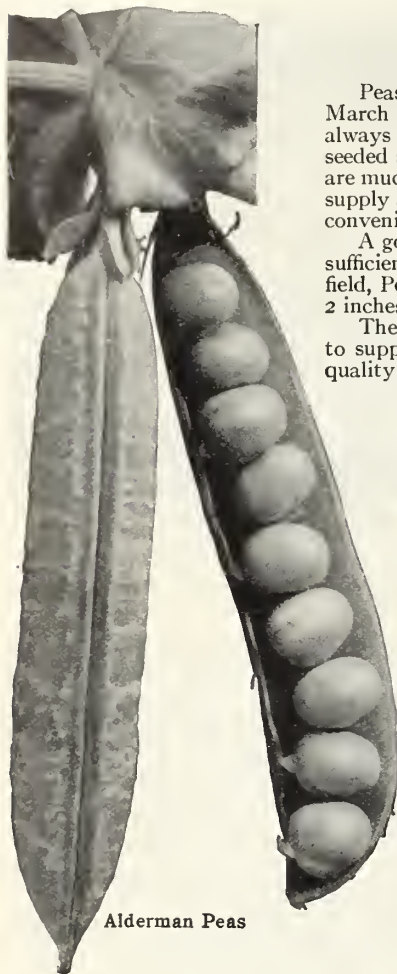
dium size and flat in shape; quality good. Largely sown to produce yellow sets. Pkt. 10 cts., oz. 30 cts., $\frac{1}{4}$ lb. 90 cts., lb. \$2.50.

WHITE PORTUGAL, or Silverskin. A favorite, early, mild-flavored, pure white-skinned Onion, especially desirable for pickling. Full-grown bulbs are large and flat; not a good keeper but extra-fine in quality. If grown for young pickling Onions, sow the seed at the rate of 25 pounds per acre. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

SOUTHPORT WHITE GLOBE. The largest and handsomest of the white Onions, also the best keeper. The bulbs are uniformly globe-shaped with pure white skin and fine-grained, solid flesh of sweet, mild flavor. It grows quickly to the green-Onion stage and is largely sown by market-gardeners for that purpose. Productive and reliable. Pkt. 10 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.10, lb. \$3.50.

WHITE BUNCHING. A very quick-growing Onion of mild flavor, fine for early spring use. Good size; skin and flesh pure white. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

Growing Onions from Sets. By starting with sets, small green Onions can be produced very early and large Onions can be harvested about August 1. Plant sets as soon as the ground is ready; push them into the soil but do not cover them over, allowing 2 to 4 inches of space between, depending on whether small or large Onions are wanted. See page 24.



Alderman Peas

GARDEN PEAS

**INOCULATE THIS
SEED WITH
STIMUGERM**

Peas can be sown very early in the spring, the hardy round-seeded varieties even as early as March 1, and, generally speaking, the earlier you start your Peas the better, for the best crops are always obtained before the onset of real hot weather. For the first sowings use the smooth or round-seeded sorts, but after the first of April change to the wrinkled kinds which, although not so hardy, are much superior in quality. Make additional sowings every two weeks up to July 1 for a continuous supply all summer, but arrange to put the May and June plantings on deep, rich soil where you can conveniently water them during dry weather.

A good way to grow Peas in the garden is to plant them in double rows 6 to 8 inches apart, with sufficient space between each pair of double rows to allow for easy cultivating and picking. In the field, Peas are grown in single rows with 3 feet or more between. The seed should be covered about 2 inches deep, or somewhat deeper in warm, dry weather.

The dwarf varieties require no support, but the tall sorts should be provided with bush or wire to support the vines. Generally speaking, the tall varieties are more productive and retain their quality longer, although there are exceptions to this rule.

A quart of seed will sow 100 feet of single row; 1 to 1½ bushels will sow an acre

HARDY ROUND-SEEDED PEAS

CARTER'S EIGHT WEEKS. The earliest and one of the hardiest Peas in cultivation, this comparatively new variety is rapidly becoming a favorite for the first spring crop. The vines are vigorous and extremely productive, growing about 16 to 18 inches high and bearing pods of very good size for so early a sort. Peas large and of fine quality when young. ½pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$9.50.

MARKET SURPRISE. An unusually large-podded, extra-early sort, growing 2½ to 3 feet tall. It is about the same season as Alaska, being several days later than Eight Weeks, but the pods are larger and Peas of better quality. A reliable variety for both home and market-gardens. ½pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$9.50.

ALASKA. A very productive smooth Pea, long in favor with market-gardeners and canners. About 2½ feet tall; pods rather small, ripening all at once; Peas small and of medium quality. ½pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$9.50.

FIRST AND BEST. An old reliable. A day or two later than Alaska; similar in height, but pods and Peas are somewhat larger. ½pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$9.50.

EARLY WRINKLED PEAS

PIONEER. A very productive and reliable dwarf Pea, one of the earliest of the wrinkled kinds. The vines grow about 16 inches tall, bearing very large, curved pods, medium green in color and filled with large Peas of fine quality. ½pt. 20c., pt. 30c., qt. 50c., pk. \$2.75, bus. \$9.50.

LAXTONIAN. The acknowledged leader in quality among early dwarf Peas and one of the best varieties for the home-garden. Of the same general type as Pioneer but a trifle taller and the pods and Peas are darker green. ½pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$9.50.

WORLD'S RECORD. The earliest wrinkled Pea, and one of the most popular varieties for both market and home plantings in this section. It closely resembles the old standard Gradus; in fact, might be called an extra-select strain of that variety, but is a few days earlier and the pods are a shade smaller. ½pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$9.50.

GRADUS. A grand old standby, second only to World's Record in earliness and a most dependable producer under all conditions and for all purposes. Vines 3 feet high; pods about 4 inches long, broad and slightly curved, containing 7 to 9 Peas of excellent quality. ½pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$9.50.

EXTRA-EARLY TELEPHONE. A good strain of the Gradus type, popular with market-gardeners. ½pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$9.50.

THOMAS LAXTON. As early as Gradus and grows to the same height. The pods are a little shorter and more blunt but they are always crammed full of large, tender Peas of most superb quality. Desirable for the market-garden. ½pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$9.50.

LITTLE MARVEL. A very dwarf, large-podded variety which comes into bearing after Gradus and just before Laxtonian. The vines grow about a foot high and bear big crops of ¾-inch pods, containing large Peas of excellent flavor. A good Pea to plant in gardens where space is limited. ½pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$9.50.

LAXTON'S PROGRESS. This new, dwarf, early sort comes in much earlier than Laxtonian or any other Pea of its class. The Peas are deep green, of excellent flavor, fully wrinkled, and average 9 to 10 to the pod. Grows 18 inches high. ½pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

NOTT'S EXCELSIOR. Same height and season as Little Marvel but the pods and Peas are smaller. Good quality and very prolific. ½pt. 20c., pt. 30c., qt. 50c., pk. \$2.75, bus. \$9.50.

World's
Record Peas

MIDSEASON AND LATE WRINKLED PEAS

POTLATCH. Productive main-crop Pea of special value to the home-gardener on account of its dwarf growth and extra-fine quality. Vines luxuriant, 2 feet high; pods deep green, 5 inches long and quite broad; Peas large and tender, often 10 to a pod. ½pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$9.50.

DWARF TELEPHONE. Also known as "Daisy." A little earlier than Potlatch, growing 2½ feet tall, with 4½-inch pods, containing 7 or 8 Peas of the very best quality. ½pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$9.50.

PRINCE EDWARD. One of the newest in this class and probably the most productive. Matures with Telephone; vines medium green, pods dark green in color. Highly recommended to market-gardeners and for late use in the home-garden. ½pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$9.50.

IMPROVED TELEPHONE. The best strain of this well-known standard variety. The vines are vigorous, growing 4 feet high, with broad, heavy leaves and broad pods, 4½ inches long, light green in color, and well filled with 8 to 10 extra-large Peas. Bears several good pickings. Quality fine, the Peas remaining tender and sweet for a long time. ½pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$9.50.

ALDERMAN. Perhaps the best all-round of the Telephone type. Vines strong and vigorous; leaves and pods rich dark green; productive; quality the finest; matures with Telephone. ½pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.75, bus. \$9.50.

MAMMOTH-PODDED SUGAR. A tall, late, prolific variety which produces big, broad pods, so tender and sweet that the whole pod can be cooked and served like snap beans. If you have not grown sugar-pod Peas, be sure to try them this year. ½pt. 20 cts., pt. 35 cts., qt. 65 cts., pk. \$4, bus. \$15.



Pioneer Peas. See page 22

PEPPER

An ounce of seed will produce about 1,500 plants

Peppers require a moderately rich and light soil, a long growing season, and plenty of warmth at all stages. Grow them like egg-plants, starting the seed indoors or in the hotbed in March, transplanting to pots or dirt-bands when the second or third leaf has developed, and resetting in the garden about June 1. Space the plants 2 to 2½ feet apart.

RUBY KING. An early and productive, true sweet Pepper. The fruits, when ripe, are bright red, averaging 4 inches in length and 3 inches in diameter, tapering to a blunt point. The flesh is quite thick, sweet, and always mild. A fine variety for the home-garden. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.25, lb. \$4.

WORLD BEATER. A fine, new selection of the Ruby Giant type. Later but larger and a little more blocky in shape than Ruby King; flesh quite thick and sweet; bright scarlet when ripe. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.25, lb. \$4.

RUBY GIANT. Thick-fleshed and, next to Chinese Giant, the largest of the sweet Peppers. Early, reliable, and fairly productive. Deep green, changing to rich red when ripe. Handsome Pepper of fine quality. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.25, lb. \$4.

SWEET SPANISH. A large, rich scarlet Pepper of exceptionally mild flavor. One of the best sorts for baking or for mangoes. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.25, lb. \$4.

BULL NOSE. Largely grown by market-gardeners on account of its productiveness. Fruits deep green, becoming vivid scarlet as they mature, medium in size, square and blunt-pointed. Generally considered a sweet Pepper but the flesh is often strong in flavor and sometimes quite hot. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.25, lb. \$4.

PIMIENTO. A select strain of the famous Spanish Pepper, the thickest-fleshed and choicest quality variety in cultivation. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.25, lb. \$4.

HARRIS' EARLY GIANT. Large, early variety about 4 inches long by 3 inches through. It is deep green, turning to red, and of sweet, pleasant flavor. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.25, lb. \$4.

CALIFORNIA WONDER. (New.) Has thicker, firmer, heavier flesh than any other Pepper, and a deliciously sweet spicy flavor with no bite to it. Fruits are bright green, changing to brilliant light crimson, and are ideal for stuffing because of their blocky shape. Pkt. 10 cts., oz. 75 cts., ¼lb. \$2, lb. \$7.

NEAPOLITAN. A solid, mild Pepper 4 inches long by 2 inches in diameter, and tapering irregularly from the shoulder. It is green when young and glossy red when ripe. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.25, lb. \$4.

CHINESE GIANT. The largest of all Peppers, the fruits often measuring 5 inches in length and diameter. Late but productive; flesh thick and very mild and sweet; deep red when ripe. Pkt. 10 cts., oz. 75 cts., ¼lb. \$2, lb. \$7.

LONG RED CAYENNE. Pods about 6 inches long, slender and pointed, bright scarlet; flesh very hot in taste and pungent in odor. Pkt. 10 cts., oz. 50c., ¼lb. \$1.25, lb. \$4.

SMALL CAYENNE. Bushy plants, loaded with little, slender pods, about 1½ inches long. Fiery hot. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.25, lb. \$4.

LARGE RED CHERRY. Fruits erect, round or cherry-shape and very hot. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.25, lb. \$4.

HUNGARIAN WAX. Solid pale green, about 6 in. long and 2 in. through, turning waxy yellow and finally red when ripe. Pkt. 10 cts., oz. 75 cts., ¼lb. \$2, lb. \$7.

BULGARIAN LONG RED. Long curving pods tapering from one inch to a point. Bright crimson. Pkt. 10 cts., oz. 75 cts., ¼lb. \$2, lb. \$7.

GOLDEN QUEEN. Of all yellow-fruited Peppers, Golden Queen is the largest, most productive, and finest. The fruits are very heavy, unusually meaty, and strictly mild. The skin is a bright and attractive glossy golden yellow. The plants produce uniform handsome fruits with astonishing freedom. Pkt. 10 cts., oz. 75 cts., ¼lb. \$2, lb. \$7.



World Beater Pepper



Onion Sets

ONION SETS

We carry an extra-choice grade of Onion Sets in both white and yellow sorts. The prices are quoted below and are subject to change as a shortage is likely to develop later in the season. Ask for special quotation on large quantities.

WHITE. Qt. 25 cts., pk. \$1.25, bus. \$4.50.

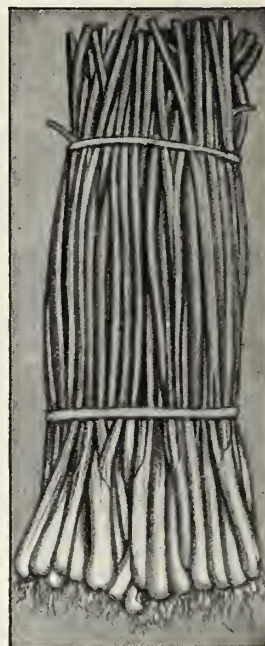
YELLOW. Qt. 20 cts., pk. \$1.10, bus. \$4.

POTATO ONION SETS. Qt. 40 cts., pk. \$2.25, bus. \$7.

The above prices do not include postage. If wanted by mail, add 10 cts. for 1 qt., 12 cts. for 2 qts., 20 cts. for 1 pk.

ONION PLANTS

These young plants of the Prizetaker and White Bermuda Onions start into growth more quickly and grow more vigorously than dormant sets, and they make very smooth, handsome Onions of uniform size and shape, good sweet flavor, and excellent keeping quality. They are cheaper than sets, quality and yield considered, even on a small garden plot. Perfectly hardy and may be planted as early as the ground can be prepared. Place your order early, specifying which variety you want. Postpaid: 100, 50 cts.; 500, \$1.60; 1,000, \$3. Special prices on larger quantities.



Onion Plants

OKRA or GUMBO

Grown for its seed-pods, which are pickled when young, before they get tough, and used for flavoring and thickening soups. Popular in the South. Sow late in May, in drills about an inch deep and 2½ feet apart and thin out to about 1 foot apart in the row. For an early crop, start seed in the hotbed late in March.

One ounce will sow about 25 feet of row; 20 pounds will sow an acre

LONG GREEN. A tall-growing variety which bears quantities of deep green pods that average 4 to 5 inches in length at the edible stage. Slow to ripen. Pkt. 10c., oz. 15c., ¼lb. 25c., lb. 75c.

DWARF PROLIFIC. Early and, as the name implies, low in growth and productive. Pods of medium size; light green. Pkt. 10 cts., oz. 15 cts., ¼lb. 25 cts., lb. 75 cts.

PARSLEY

An ounce of seed will sow 150 feet of drill; 8 pounds will sow an acre

Everyone wants a little bed of Parsley for flavoring and garnishing. Choose a rich, mellow spot and sow the seed as early in the spring as possible, in drills about a foot apart and half an inch deep. The seed is very slow to germinate, sometimes requiring six to eight weeks. Soaking it in luke-warm water for a few hours before sowing will help to hasten it. When the plants are strong enough, thin them to stand about 4 inches apart. Parsley beds may be carried over winter in a frame or by mulching with leaves or straw.

DOUBLE-CURLED. A compact-growing variety with bright deep green leaves that are beautifully curled and fringed. The most attractive Parsley for garnishing. Pkt. 10 cts., oz. 15 cts., ¼lb. 25 cts., lb. 75 cts.

CHAMPION MOSS CURLED. A hardy and vigorous sort that can be cut the year around. Leaves attractively crimped and curled. Pkt. 10 cts., oz. 15 cts., ¼lb. 25 cts., lb. 75 cts.

PLAIN or Single. The leaves are deeply cut but not curled. Much stronger in flavor than the curled sorts and, on this account, preferred for soups, etc. Pkt. 10 cts., oz. 15 cts., ¼lb. 25 cts., lb. 75 cts.

HAMBURG TURNIP-ROOTED. Grown for its roots, which resemble short, thick parsnips and are highly flavored; useful in soups and stews. Grown like carrots. The roots can be stored for winter use. Pkt. 10 cts., oz. 15 cts., ¼lb. 25 cts., lb. 75 cts.

PARSNIP

An ounce of seed will sow 150 feet of row; 8 pounds will sow an acre

A deep, fine but not necessarily rich soil is best for Parsnips. Spade it deep and pulverize it well, as early as the ground can be worked. Sow the seed in drills 1½ feet apart and half an inch deep, and when the plants are well up thin them out to stand about 6 inches apart. Cultivate frequently. The roots mature in the fall and, being perfectly hardy, may be left in the ground all winter, to be dug as needed. Their flavor is improved by freezing.

HOLLOW CROWN. A standard table variety, producing long, smooth roots with white skin and fine-grained flesh. Productive and reliable. Pkt. 10c., oz. 15c., ¼lb. 25c., lb. 75c.

GUERNSEY. Thicker at the top and not quite so long as the preceding; consequently, a better variety to grow on shallow soils. Good quality. Pkt. 10c., oz. 15c., ¼lb. 25c., lb. 75c.

MALTESE HALF-LONG. An early variety of particularly fine quality. Roots rather short and thick. Pkt. 10 cts., oz. 15 cts., ¼lb. 25 cts., lb. 75 cts.

WHITE LISBON. The largest and most handsome variety. Resembles Hollow Crown but the roots are smoother and whiter. Fine quality. Pkt. 10c., oz. 15c., ¼lb. 25c., lb. 75c.



Hollow Crown Parsnips



Long Green Okra



Mammoth Golden Cushaw Pumpkin

PUMPKIN

The seed should be sown as soon as the ground gets warm, usually during the latter part of May in this section. Pumpkins are sometimes grown in corn, but for table use it is customary to plant them in hills 6 to 8 feet apart, dropping from four to eight seeds in each hill. It is a good plan to pinch back the vines after they get 4 to 5 feet long. If you want extra-large specimen fruits, dig plenty of manure into the hill before planting and permit only one or two fruits to mature on each plant.

One ounce of seed will plant about 25 hills; 4 to 5 pounds will plant an acre

MAMMOTH GOLDEN CUSHAW. A large crookneck variety with golden orange skin and deep, rich yellow flesh of the very finest quality. A productive sort and largely grown for table use. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

LIVINGSTON CUSHAW. An old standby and a great favorite for pies. Crookneck shape; skin mottled green and white; flesh yellow, fine-grained and sweet. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

SMALL SUGAR. Small but productive and of splendid quality. Fruits round with bright orange skin and thick, sweet flesh. Undoubtedly the best table Pumpkins for the small garden. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

MAMMOTH TOURS. Grows to an enormous size, fruits often weighing 100 pounds or more. Skin mottled green; flesh yellow, rather coarse. Used principally for stock feeding. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.



King of Mammoths Pumpkin

LARGE CHEESE. Big, flat, handsome Pumpkins with light buff skin and yellow flesh. Prolific; largely grown for market and canning. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

KING OF MAMMOTHS. The largest of all; when grown for exhibition fruits sometimes weigh 200 pounds. Round, flattened at the ends, with golden orange skin and deep yellow flesh of fair quality. A good keeper. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

CONNECTICUT FIELD. The common big field Pumpkin. Very productive; fruits oblong in shape, with bright yellow skin and rather coarse flesh. Usually grown for stock. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 85 cts., 5 lbs. \$3.50.

KENTUCKY FIELD. Fruits a little smaller and more round in shape than the preceding. Flesh of better quality and suitable for table as well as stock. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 85 cts., 5 lbs. \$3.50.

RHUBARB

Rhubarb gives best crops on deep, light soil which has been liberally enriched with manure. It is cheapest to start with seed but only a percentage of the plants grown from seed will be worth saving. Sow early in the spring, in drills an inch deep and a foot apart, and thin the plants to stand about 5 inches apart. The following spring, reset the best plants 3 to 4 feet apart each way. If you start with roots, plant them with the crown about 1 inch below the surface. Cultivate Rhubarb frequently and keep the weeds out. Give water, if needed, while the plants are producing and dress with manure every year after the cutting season is over. The first pulling may be made the second season after planting and the plant will continue to bear for many years.

VICTORIA. This is the best all-round variety. Productive and comes fairly true from seed. Seed, pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 60 cts., lb. \$2. Roots, 15 cts. each, \$1.50 per doz.; postpaid, \$1.75 per doz.

SALSIFY

Often called "Vegetable Oyster" or "Oyster Plant" on account of its flavor. Salsify is easy to grow on any good garden soil. Spade to a depth of a foot or more and make the soil as fine as possible. Sow the seed early, as the plants require a long season to attain full size; cover about an inch deep, in rows 12 to 15 inches apart, and thin the plants to 3 inches apart in the rows. Roots may be left in the ground all winter and dug as needed.

One ounce of seed will sow about 50 feet of drill; 10 pounds will sow an acre

MAMMOTH SANDWICH ISLAND. The best variety. Roots often 10 to 12 inches long, tender, and of delicious flavor. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.50.



Mammoth Sandwich Island Salsify

RADISHES

Everybody can and everybody wants to grow Radishes. Most any soil will do; if it is light and mellow so much the better. An extra-early crop can be grown in the hotbed from seed sown in February or early March. Start outdoors as soon as the ground can be put in shape and sow seed of any of the quick-growing round or olive-shaped sorts, not too thick, in drills a half inch deep and 1 to 1½ feet apart. Thin out the seedlings promptly to stand about an inch apart in the rows. Keep them growing fast by hoeing or cultivating every two or three days, otherwise they become pithy and bitter. After putting in seed for the first crop, make additional sowings every ten days to two weeks, but for the later crops, which will ripen in warm weather, use the long varieties. For late summer and fall use, sow the Summer and Winter Radishes which are larger and slower growing but will, unlike the early round Radishes, thrive in hot weather. The Summer Radishes may be sown any time up to August 1. The big Winter Radishes should be sown late in June to attain full size before frost.

One ounce of seed will sow about 100 feet of drill; 8 to 10 pounds will sow an acre

EARLY WHITE-TIP FORCING. A very attractive little Radish for forcing in frames or for early spring planting. Round, bright scarlet with clear white tip; small leaves. Pkt. 10 cts., oz. 15 cts., ¼lb. 30 cts., lb. 85 cts.

EARLY SCARLET TURNIP. Roots of medium size, round, smooth, bright red; tops small. Grows quickly and is one of the old standbys for forcing. Pkt. 10 cts., oz. 15 cts., ¼lb. 30 cts., lb. 85 cts.

NON PLUS ULTRA. The earliest forcing Radish in general use, ready for the table in 20 days from planting. Roots small, uniformly globe-shaped, and smooth, with brilliant scarlet skin and crisp white flesh. Fine for early sowing outdoors as well as for forcing. Pkt. 10 cts., oz. 15 cts., ¼lb. 30 cts., lb. 85 cts.



Early Scarlet Globe Radishes

EARLY SCARLET GLOBE. One of the most popular Radishes for early use. Matures medium-sized, elongated, globe-shaped, clear rosy scarlet roots in about four weeks from sowing. Quality fine; a reliable variety for forcing and always in demand. Pkt. 10 cts., oz. 15 cts., ¼lb. 30 cts., lb. 85 cts.

EARLY SCARLET OLIVE-SHAPED. A very desirable early Radish that is ready in about 20 days. Rich red color, of good appearance, with crisp, white, tender flesh of mild flavor. Pkt. 10 cts., oz. 15 cts., ¼lb. 30 cts., lb. 85 cts.

FRENCH BREAKFAST. An oblong or olive-shaped Radish of very fine quality. Early; bright carmine with clear white tip. Good for forcing and fine for the home-garden. Pkt. 10 cts., oz. 15 cts., ¼lb. 30 cts., lb. 85 cts.

GIANT BUTTER. A round, red Radish, in shape and appearance much like Non Plus Ultra but considerably larger; it grows quickly and is valuable for forcing. Pkt. 10 cts., oz. 15 cts., ¼lb. 30 cts., lb. 85 cts.

BURPEE'S SCARLET BUTTON. A select strain of the Non Plus Ultra class. Extra-early; roots small with bright red skin and crisp, white flesh. Pkt. 10 cts., oz. 15 cts., ¼lb. 30 cts., lb. 85 cts.

CRIMSON GIANT. The largest of the early, round Radishes, maturing in about four weeks from sowing. Handsome, deep red, globe-shaped roots. Good for forcing and fine for the home-garden. Remains crisp and mild longer than other early sorts. Pkt. 10 cts., oz. 15 cts., ¼lb. 30 cts., lb. 85 cts.

GOLDEN YELLOW OVAL. Popular for late plantings as it grows well in hot weather. Olive-shaped, about 1½ inches long, with russet-yellow skin and pure white flesh of fine flavor. Pkt. 10 cts., oz. 15 cts., ¼lb. 30 cts., lb. 85 cts.

ICICLE. If you grow only one kind of Radish in your garden, you will be safe in choosing Icicle. It grows quickly, making handsome, long, smooth roots with pure white skin and crisp, mild flesh. Being more resistant to heat than other early Radishes, it is reliable for either spring or summer use and retains its crispness and flavor for a long time after it becomes ready for use. Suitable also for forcing. Pkt. 10 cts., oz. 15 cts., ¼lb. 30 cts., lb. 85 cts.

LONG SCARLET SHORT TOP. An extra-early long Radish, ready for use 25 days after sowing. The roots grow 5 to 6 inches long, with a third of their length above ground. Bright scarlet. Pkt. 10 cts., oz. 15 cts., ¼lb. 30 cts., lb. 85 cts.

COPENHAGEN MARKET. A short-leaved, round, red sort, with the lower part white. Excellent both for forcing and outdoors. Pkt. 10 cts., oz. 15 cts., ¼lb. 30 cts., lb. 85 cts.

CINNINNATI MARKET. In shape much like Long Scarlet Short Top but a little longer and with a very small top. Skin rosy scarlet; flesh clear white, very brittle and mild. Popular for forcing. Pkt. 10 cts., oz. 15 cts., ¼lb. 30 cts., lb. 85 cts.



Icicle Radishes



White Stuttgart Radish

SUMMER RADISHES

WHITE LADY FINGER. Resembles Icicle but grows more slowly and is particularly desirable for late sowings as it retains its fine, crisp quality for a long time even in the hottest weather. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 85 cts.

WHITE VIENNA. Almost identical with Lady Finger. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 85 cts.

CHARTIER, IMPROVED. A splendid variety to plant for second-early, being intermediate in season between the early and the Summer Radishes. Roots 7 to 8 inches long, bright rose with white tip. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 85 cts.

WHITE STRASBURG. A long, oval Summer Radish of handsome appearance; a leading variety for market. Roots about 5 inches; skin and flesh pure white; remains firm and brittle longer than most sorts. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 85 cts.

WHITE STUTTGART. A large, late, pure white kind, with almost round or top-shaped roots 4 inches in diameter. Of good quality and a good keeper. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 85 cts.

WINTER RADISHES

LONG BLACK SPANISH. One of the hardiest and best keeping sorts. Roots 7 to 9 inches long and 2 to 3 inches in diameter at the top, tapering to an abrupt point. Skin black; flesh clear white and of fine quality. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 85 cts.

LONG WHITE SPANISH. Exactly like the preceding except in color of skin. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 85 cts.

ROUND BLACK SPANISH. Similar to the Long Black Spanish. Roots nearly round, 3 to 4 inches in diameter. The round shape is preferred in some markets. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 85 cts.

CELESTIAL, or White Chinese. Grows more quickly than the Spanish types; roots handsome, cylindrical in shape, often 8 inches long and 3 inches in diameter; skin and flesh pure white. Of fine quality and a good keeper. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 85 cts.

CHINESE ROSE. Roots 4 to 5 inches long, cylindrical, or larger near the bottom; skin smooth, bright rose in color; flesh white, crisp and tender. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 85 cts.

SPINACH

One ounce of seed will sow about 100 feet of drill; 14 to 15 pounds will sow an acre

From the standpoint of health, there are few vegetables more valuable than Spinach. Room should be made for it in every garden, small or large. It is easy to grow but should have a moderately rich, well-dug soil. Start the first crop in drills an inch deep and 15 inches apart as soon as the ground can be made ready in the spring, and follow this with succession sowings every ten days up to the middle of May. Make additional sowings in August and September for fall use. Thin the plants to stand about 5 inches apart. To provide Spinach during hot weather, when ordinary varieties do not thrive, make a sowing of the heat-resistant New Zealand Spinach about May 1. For extra-early Spinach in the spring, sow one of the hardy sorts late in September and protect the plants over winter.

BLOOMSDALE SAVOY-LEAVED. Very hardy and, consequently, most desirable for autumn and early spring use. The plants are upright and vigorous, with thick crumpled leaves. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 45 cts., 5 lbs. \$1.65, 10 lbs. \$2.75, 25 lbs. \$5.50.

TRIUMPH. A large-growing variety which stands for a long time before going to seed. Leaves broad, somewhat crumpled, tender, and of fine flavor. For spring and early summer. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 45 cts., 5 lbs. \$1.65, 10 lbs. \$2.75, 25 lbs. \$5.50.

LONG SEASON. Somewhat like Triumph, remaining in marketable condition a long time. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 45 cts., 5 lbs. \$1.65, 10 lbs. \$2.75, 25 lbs. \$5.50.

VICTORIA. Another variety of the Triumph type, which stands hot weather better than other sorts and is slow to go to seed. Leaves very large and thick, deep green in color, and of superior quality. Oz. 10c., $\frac{1}{4}$ lb. 20 cts., lb. 45 cts., 5 lbs. \$1.65, 10 lbs. \$2.75, 25 lbs. \$5.50.

IMPROVED LARGE ROUND THICK-LEAVED. A hardy, vigorous sort, particularly valuable to market-gardeners for early spring sowing. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 45 cts., 5 lbs. \$1.65, 10 lbs. \$2.75, 25 lbs. \$5.50.

KING OF DENMARK. A very fine new Spinach which stands a week or two longer before shooting to seed than any other sort. The plants are large with thick, crumpled, dark green leaves. Oz. 10c., $\frac{1}{4}$ lb. 25c., lb. 50c., 5 lbs. \$2, 10 lbs. \$3.50, 25 lbs. \$7.50.

JULIANA. A good second-early variety that grows close to the ground and has dark green, crumpled leaves that keep fresh-looking and retain their crispness a long time after being cut. Stands well. Oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 50 cts., 5 lbs. \$2, 10 lbs. \$3.50, 25 lbs. \$7.50.

BLOOMSDALE (LONG-STANDING). A very early, blight-resistant, hardy sort that is much planted for market and canning. Leaves curled and wrinkled. Oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 50 cts., 5 lbs. \$2, 10 lbs. \$3.50, 25 lbs. \$7.50.

NEW ZEALAND. A distinct type of Spinach which makes large, bushy plants, often 3 feet in diameter. Only the young leaves and tips of the branches are used and the more they are picked, the faster the plant seems to grow. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 20 cts., lb. 50 cts., 5 lbs. \$2.25, 10 lbs. \$4.



Juliana Spinach

SQUASH

One ounce of Squash seed will plant 15 to 20 hills; 3 to 5 pounds will plant an acre, according to variety

In general culture the Squashes are much like the melons, but they do not require such a long growing season and are more dependable producers. Best results are secured on light soils which have been heavily manured. Sow the seed in hills, about 4 feet apart each way for the summer varieties and 10 to 12 feet for the late or winter sorts. Do not sow, however, until the soil is warm and dry—the end of May is about right in this section. Use plenty of seed in each hill, twelve to fifteen anyway, to provide against the inevitable losses from insects; after the plants get a good start pull out all but four or five. The Squash vine borer may cause some trouble during the season but can be discouraged by sprinkling tobacco dust close around the plants. Covering the vines with a little soil at several joints so that they take root there will also help to limit its destructiveness. The black Squash bug can best be kept in check by hand picking; spraying with arsenate of lead is the proper remedy for the striped beetle.

MAMMOTH WHITE BUSH. One of the earliest and most popular of the Summer Squashes. Compact in growth and prolific, with ivory-white fruits, round with scalloped edges. For both market and home-gardens. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. \$1.

YELLOW SUMMER CROOKNECK. An old favorite. Long, curved fruits with thin, golden yellow, warted skin; sweet, tender flesh. Pkt. 10c., oz. 15c., $\frac{1}{4}$ lb. 35c., lb. \$1.



Hubbard Squash

COCOZELLE (Italian Vegetable Marrow). One of the most useful Summer Squashes for home planting. It is bushy in growth, requiring little space, and produces quantities of oblong fruits, averaging a foot long, with green skin, mottled and striped with yellow and darker green. Quality extra-fine. Pkt. 10c., oz. 20c., $\frac{1}{4}$ lb. 50c., lb. \$1.50.

FORDHOOK. An excellent variety, suitable for both summer and winter use. The fruits are oblong, 8 to 10 inches long, with thin, light yellow skin and thick, straw-colored flesh. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

BOSTON MARROW. A productive late variety, generally considered the best for canning and for pies. It is shaped like the well-known Hubbard, with orange skin and thick flesh. A good keeper. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. \$1.

ORANGE MARROW. Earlier, more prolific, and a little smaller, but otherwise similar to Boston Marrow. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. \$1.

IMPROVED HUBBARD. A selection from the old Hubbard, with more vigorous vine and slightly larger fruits. Skin smooth, dark green; flesh deep yellow and of superb quality. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

WARTED HUBBARD. Similar in size and shape to the Improved Hubbard, but the skin is heavily warted and very dark green, almost black, in color. The best keeper of the Hubbard type. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

GOLDEN HUBBARD. True Hubbard shape but earlier, a trifle smaller, and the skin is a rich orange-red in color. Flesh deep orange, dry and sweet; an excellent keeper. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

HERBS

Grandmother's garden always had a little patch of herbs and, doubtless, much of the savoriness of grandmother's cooking as well as the effectiveness of her home remedies was derived from her store of "yarbs." Most of the commoner herbs are perennials, although they last but a few seasons in ordinary situations. Any odd corner will do, providing it is sunny and the soil not too hard or poor. Sow seed in early spring, thinning out as needed. The seeds of many herbs are slow and irregular in germinating.

ANISE. Used principally for flavoring and for garnishing. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 60 cts., lb. \$2.

BALM. Used for making a medicinal tea. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

SWEET BASIL. A highly aromatic herb whose leaves and tops are used for seasonings and, in a limited way, in salads. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

BORAGE. An annual plant that is used freely by bee-keepers. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

CARAWAY. The seeds of this plant are used for culinary purposes, in confectionery and also in medicines. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

CARDOON. Grown somewhat like celery and served like asparagus. Pkt. 10 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.25, lb. \$4.

CHIVES. Used as a substitute for onions in soups and salads. Pkt. 25 cts., oz. 75 cts., $\frac{1}{4}$ lb. \$2.25, lb. \$8.

CORIANDER. An annual whose seeds are strongly aromatic. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

CURLED CHERVIL. Leaves of Chervil very much resemble those of parsley and are used in a similar way. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 60 cts., lb. \$2.

DILL. An annual plant, seeds of which are used as a seasoning and also in the preparation of Dill pickles. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. \$1.

FLORENCE FENNEL. A very delicious salad vegetable. It can be served like celery or boiled. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

HOREHOUND. Annual; chiefly used for medicinal purposes, as it has strong tonic properties. Pkt. 10 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.25, lb. \$4.

LAVENDER. Dried flowers impart a pleasing odor to the contents of linen-chests. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

SWEET MARJORAM. Pleasingly fragrant and of particular value as a seasoning. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

RUE. A medicinal plant of extremely pungent taste. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

SAFFRON. Cultivated for medicinal purposes. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.50.

SAGE. An old familiar herb with a pungent odor. Pkt. 10 cts., oz. 30 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

SUMMER SAVORY. Dried foliage used for flavoring during the winter months. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

SWEET FENNEL. The leaves are finely cut and are used for garnishing. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

THYME. The leaves and young branches are used for seasoning. Pkt. 10 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

WORMWOOD. Has medicinal qualities. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.



Mammoth White Bush Squash



Purple-Top Strap-Leaf Turnip

EXTRA-EARLY WHITE MILAN. The quickest growing of the Turnips, largely used for spring sowings. The roots are small and flat with pure white skin and flesh; mild and sweet. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. \$1.

YELLOW GLOBE. Round, smooth roots of medium size, with light yellow skin and flesh. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 75 cts.

COW HORN. Roots shaped rather like a carrot, often over a foot long and 3 inches in diameter, with a considerable part of their length above ground. Skin and flesh white. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 75 cts., 5 lbs. \$3.25.

SEVENTOP. A variety widely grown throughout the South in regions of milder winters. Used extensively for winter greens. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 75 cts.

RUTABAGA or SWEDE TURNIP

Rutabagas are grown much like garden Turnips but they require a longer season and attain a larger size. Sow during June or early July in rows 15 to 18 inches apart and thin out to 8 to 10 inches. Where the summers are temperate an early crop can be grown from spring sowings. Although largely grown for feeding to stock, Rutabagas are considered by many to be superior to Turnips in table quality and they are particularly good winter keepers. Dig the roots before the ground freezes and store in a cold cellar or in pits outdoors.



Improved Purple-Top Rutabaga

TURNIPS

Any ordinary garden soil will produce good crops of Turnips. Freshly manured land should not be used, but deep digging and thorough preparation are essential to produce smooth, well-flavored roots. As Turnips develop best in cold weather, the main crop is usually sown in July or August, to mature during the fall, but early-season crops can be obtained by sowing the quick-maturing varieties as soon as the ground can be prepared in the spring. Sow in drills 12 to 15 inches apart and cover firmly with about $\frac{1}{2}$ inch of soil. Scatter the seed thinly so as to reduce the amount of thinning required when the plants are 2 to 3 inches high. The early sorts should stand 3 to 4 inches apart in the rows and the large main-crop Turnips about 6 inches. The roots may be stored like beets for winter use, if dug before hard frost.

An ounce of seed will sow about 100 feet of drill; a pound will sow an acre

PURPLE-TOP STRAP-LEAF. A quick-growing variety desirable for both early and late planting. The roots are flat and quite large; skin white except for a ring of purple around the top; flesh white, fine-grained and of excellent table quality. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 75 cts., 5 lbs. \$3.25.

PURPLE-TOP WHITE GLOBE. The standard main-crop Turnip for market and often grown for feeding to stock. The roots are large, nearly round, white with upper third purple. The flesh is firm and of good quality. Productive and a splendid keeper. Pkt. 10c., oz. 15c., $\frac{1}{4}$ lb. 30c., lb. 75c., 5 lbs. \$3.25.



Purple-Top White Globe Turnip

SWEET GERMAN. A large, globe-shaped variety with white skin and flesh. Fine-grained, solid and sweet, lacking the strong taste which many Turnips develop. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 75 cts.

IMPROVED PURPLE-TOP. Hardy and productive, with large, globular roots, very uniform in shape and size. Skin smooth, light yellow with purple top; flesh yellow, firm, and of fine quality. Can be stored in good condition all winter and well into the following summer. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 75 cts.

TOBACCO

For best results, Tobacco requires a rich, mellow soil and careful cultivation. Sow the seed in frames or a fine seed bed early in April and reset the plants in the open ground late in May or early in June, spacing them 2 feet apart in rows 4 feet apart. Cultivate frequently.

CONNECTICUT SEED-LEAF. One of the hardiest and most popular sorts. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$1.75.

HAVANA. True type; productive and of finest quality. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$1.75.

TOMATOES

An ounce of seed will produce about 2,000 plants;
4 ounces should give sufficient plants for an acre

Thriving in any soil, and producing the most bounteous returns in small space, Tomatoes are an ideal crop for the home-garden. They should have plenty of sunlight and moisture but are not at all particular as to soil. The seed should be sown indoors in late February or March, in shallow boxes or pots placed in a warm, sunny window. As soon as the little plants are strong enough, thin or transplant them to stand 3 to 4 inches apart; then when they are about 3 inches high transfer them to small paper pots or dirt-bands. To secure extra-strong, stocky plants, transfer them again, when 6 to 8 inches tall, to larger pots. As the season advances, "harden" them by exposing them to the air on warm days, but protect them carefully from chill at all times. When all danger from frost is past—generally after the middle of May—set them out in the garden, spacing them about 4 feet apart each way. Water freely at the time of transplanting and push the young plants along with an occasional light application of nitrate of soda or liquid manure. In large field plantings it would hardly be practicable to stake each plant, but in the home-garden it is certainly well worth while, for not only do staked plants take up less room but they produce more and better fruit, and ripen earlier. Set stout stakes 5 to 6 feet high firmly in the ground close to the base of each plant, trim off all but two or three of the strongest shoots and tie these to the stake with strips of cloth, soft twine or raffia. As the plants grow, trim out side shoots and suckers, and when the vines reach the top of the stake, pinch off the tops. To guard against blight spray the plants with Bordeaux Mixture or Sulfolcide two or three times during the season; arsenate of lead will kill the tomato worms. The average home-gardener will find it advisable to grow at least three varieties of Tomatoes to provide a succession of fruit during the season.



John Baer
Tomato

BREAK O'DAY. A new scarlet-fruited variety developed from a cross between Marglobe and Marvana, and introduced by the United States Department of Agriculture. It is earlier than Marglobe and fruits are freer from cracking around stem end than Marglobe. They are of good size, smooth and of good quality. Trials have shown it to be a desirable type to plant for early market as the quality of fruit is exceptional compared to other early maturing varieties. Pkt. 15 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts., $\frac{1}{4}$ lb. \$2.25, lb. \$8.

JOHN BAER. Undoubtedly one of the most valuable of all early varieties of Tomato. The fruits are of good size, perfectly smooth, and nearly globe-shaped, with brilliant scarlet skin and firm flesh, entirely free from core and with few seeds. The flavor is mild and deliciously sweet. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

BURBANK. (94 days.) An earliest, scarlet-fruited variety. Fruits are small to medium in size, quite smooth but inclined a little to angularity. Cell structure is very irregular. Fruits set in large clusters. Vine is rather small, open and spreading. It is similar to Earliana. Pkt. 15 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts., $\frac{1}{4}$ lb. \$2.25, lb. \$8.

NORTHERN ADIRONDACK EARLIANA. A splendid strain which has become the most reliable extra-early in many sections. Pkt. 15 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts., $\frac{1}{4}$ lb. \$2.25, lb. \$8.

EARLIANA, SPARK'S. This is the original Earliana Tomato, for years the standby for first-early market. The plants are compact, with light foliage; the fruits are of good size, bright red, and quite solid. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

AVON EARLY. A variety which ripens with Earliana. It has smooth, deep red fruits which are nearly round, smooth, solid, free from cracks, and excellent for shipping. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

JUNE PINK. The best extra-early pink or purplish colored Tomato, similar to Earliana in earliness and in most other respects except color. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

BONNY BEST. The most popular Tomato grown to follow Earliana or John Baer. It is remarkably productive even on light soils, producing large, round, smooth fruits in handsome clusters. Uniform in size and shape, solid, free from cracks, bright scarlet in color. A fine variety for the home-garden. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

CHALK'S EARLY JEWEL. Ripening at about the same time as Bonny Best, this variety is an enormous producer, particularly on heavy soils. The fruits are a little larger than Bonny Best, slightly flattened in shape and bright scarlet in color, always solid, with hard, smooth skin. Excellent for market and shipping. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$7.

EARLY DETROIT. A pink-fruited Tomato which may be compared with Chalk's Early Jewel among the scarlet sorts. Fruits nearly round, firm, and of fine quality. One of the best for shipping. Pkt. 10c., $\frac{1}{2}$ oz. 30c., oz. 50c., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

GULF STATE MARKET. An early, purple-fruited variety. Smooth and free from cracks; productive; a good shipper. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

BEAUTY. A popular, main-crop, purple-colored variety which bears for a long season. Fruits large, slightly flattened, solid and of fine quality. Can be shipped long distances without injury. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.



Marglobe Tomato



Livingston's Globe Tomato

TOMATOES, continued

LIVINGSTON'S GLOBE. One of the most valuable Tomatoes in cultivation, coming right after Chalk's Jewel and continuing to bear until frost, producing heavy crops of good-sized, uniform, distinctly globe-shaped fruits with smooth, glossy, purplish rose skin. Mild in flavor, meaty, and with very few seeds. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$7.

MARGLOBE. The fruits are of medium size, smooth, solid, and deep from stem to blossom end, with an irregular cell structure. They are borne in clusters of five to seven. The vine makes medium to heavy growth. A good main-crop variety. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$7.

TRUCKER'S FAVORITE. A dependable, late, main-crop, purple sort, bearing large, flattened fruits which are smooth and solid and of fine quality. The vines are unusually vigorous and not subject to blights. One of the most productive. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$7.

BEEFSTEAK. Late; purplish pink; vines strong and vigorous; very little seed; large, solid fruit. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts., $\frac{1}{4}$ lb. \$2.25, lb. \$8.

MATCHLESS. A favorite, main-crop, bright red Tomato. The plants are strong-growing, bearing big crops of large, solid fruits. Quality excellent. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$7.

OXHEART. (120 days.) A main-crop, pink-fruited variety. Fruits are large, bulging, heavy and solid, tapering almost to a point, with broken cell structure. They set in clusters of three to seven. Vine growth is open and spreading. Pkt. 15 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts., $\frac{1}{4}$ lb. \$2.25, lb. \$8.

STONE. An unusually productive, smooth, bright red Tomato, probably grown more extensively than any other variety in cultivation. It is a favorite for canning and a most dependable sort for main crop in both market and home-gardens. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$7.

GREATER BALTIMORE. A selection from Stone with all the good qualities of that fine old standby, but comes into bearing a little earlier. It is particularly desirable for canning. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$7.

RED ROCK. Intermediate in season between Chalk's Jewel and Stone and resembles the latter in size and productivity. Fruits extra smooth, round, and bright red in color. Splendid for truckers and canners. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

DWARF STONE. Bushy, compact plants, bearing large, solid bright red fruits of the finest quality. Require little space and no support. Medium early. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

DWARF CHAMPION. Very dwarf and compact in growth. It comes into bearing quite early; the fruits are of medium size, round and smooth with purplish pink skin and firm flesh of fine, mild flavor. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

BUCKEYE STATE. A dark purple Tomato of very large size; late but a heavy cropper. Fruits nearly globe-shaped, always smooth and solid, seldom cracking even when fully ripened. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts., $\frac{1}{4}$ lb. \$2.25, lb. \$8.

PONDEROSA. One of the best varieties for home-gardens and probably the largest Tomato in cultivation, also the finest in table quality. The plants are vigorous, medium in season, and bear clusters of enormous fruits, which weigh as high as two pounds apiece. Somewhat irregular in shape but extremely solid and with very few seeds. Purplish pink. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts., $\frac{1}{4}$ lb. \$2.25, lb. \$8.

YELLOW PONDEROSA. The yellow-fruited varieties of Tomatoes are preferred for table use by many planters on account of their very mild and sweet flavor. Skin clear golden yellow; flesh pale yellow, solid and meaty. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts., $\frac{1}{4}$ lb. \$2.25, lb. \$8.

GOLDEN QUEEN. A productive sort, bearing good-sized, round, smooth fruits, bright yellow in color, solid and of splendid quality. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts., $\frac{1}{4}$ lb. \$2.25, lb. \$8.

YELLOW PLUM. The fruits resemble a plum in size and shape but are bright yellow in color. Enormously prolific; in great demand for preserving. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$7.



Stone Tomato

VEGETABLE PLANTS

During the planting season we are prepared to furnish the following plants:

Tomato, Cabbage, Cauliflower, Beet, Pepper, Kohlrabi, Kale, Brussels Sprouts, Celery, Sweet Potato, and Eggplant. Ask for prices when planting season opens, specifying quantity wanted.

Flower Seed Department



GROWING FLOWERS FROM SEED

For best results, use a shallow box filled with light, rich soil not likely to bake or form a crust when the surface dries. Tamp firmly, so that the level is about half an inch below the top of the box. Make shallow furrows crossways, about an inch apart. Very fine seeds, like Petunias and Portulacas, need merely marks; large seeds, like Scabiosas, Lupines, and Four-o'Clocks, should have furrows a half-inch deep. Sow the seed thinly in the rows, and label each row. Sift fine soil, mixed with sand, over the seeds, covering them to the soil-level. Then press the surface with a board or a brick, and water with a very fine nozzle or sprinkle the surface with a whisk-broom dipped in water. Cover the box with a sheet of glass and newspaper, and set it in a warm position, watching from day to day to see that the surface does not get dry or become soggy.

As soon as the seedlings break through the ground, the newspaper must be removed and the box set where it will receive the largest amount of sunlight. When the first leaves are fully formed, remove the glass or tilt it to admit air; when the seedlings are all up and gathering strength, take off the glass.

Special care will be needed in watering. If too much water is used, the seedlings are likely to damp off; if not enough, they will not grow rapidly.

While the seeds are growing, prepare other boxes into which to transplant them. Fill with light, rich soil and mark the surface into 2-inch squares, and when the seedlings have acquired their second set of leaves, transplant them. They will need shading until they take hold of the ground. After that, give them plenty of light and water until it is warm enough to set them outdoors.

If you have a coldframe, the seedlings may be transferred from the seed-trays to the coldframe instead of into boxes.

Perennials require exactly the same treatment, except that sowing may be delayed until the annuals are out of the way, and the seedlings may be grown on in a temporary nursery until autumn when they must be moved to the beds in which they are to flower next year.

ASTERS

Asters prefer an open, sunny situation and they respond amazingly to fertilizers and good cultivation. It is advisable to change the location of the Aster-bed each year if you want large flowers and lots of them. For early bloom, start the seed in a window-box or hotbed, in March, giving the little plants plenty of light and water as required, and thinning 3 to 4 inches apart, or transplanting them when a few inches high to small pots. Set them out after danger from frost is past. For solid beds of color, set the plants 8 to 10 inches apart, but if large flowers and long stems are wanted for cutting, plant at least 1 foot apart in rows 1½ to 2 feet apart. The seed may be sown outdoors in early May with good results, except that the plants will bloom later.

SEMPLER'S BRANCHING. Extra-large flowers, with heavy, incurved petals, on long, stiff stems. A magnificent sight from late August on, and ideal for cutting. Beds of one color are most attractive.

Pure White, Dark Blue, Rose-Pink, Crimson.

Each, pkt. 15 cts., ½oz. 85 cts., oz. \$1.50.

Mixed. All of the above colors. Pkt. 15 cts., ½oz. 85 cts., oz. \$1.50.

QUEEN OF THE MARKET ASTERS. The plants are low and bushy, bearing quantities of large, deep flowers from July on.

White, Pink, Crimson, Lavender, Purple.

Each, pkt. 10 cts., ½oz. 85 cts., oz. \$1.50.

Mixed Colors. Pkt. 10 cts., ½oz. 75 cts., oz. \$1.25.

GIANT CALIFORNIA, SUNSHINE. Artistic flowers with a single row of rays, and a tufted center of a contrasting color, usually golden yellow. Mixed colors. Pkt. 25 cts.



Giant California Aster



Giant California Sunshine Aster

Asters continued on page 33



Ageratum



Alyssum



Arctotis Hybrida

ASTERS, continued

GIANT CALIFORNIA, IMPROVED.

Very large, chrysanthemum-shaped flowers on long, strong stems. Excellent for large beds or cut-flower purposes.

White, Peach-Blossom, Light Blue, Light Purple, Deep Rose, Dark Purple, and Mixed. Pkt. 25 cts., 1/2 oz. \$1.75, oz. \$3.

AURORA ASTERS. A new class of China Asters with large flowers somewhat like those of the Sunshine strain, but with a larger center, full of florets and rather short outer petals. It grows about 2 feet high, with upright stems. Excellent cut-flower and a novelty of great promise.

Azure-Blue. The outer petals at the edge are large, and open clear azure-blue; all of the other petals in the quilled center are yellow. Pkt. 25 cts.

Golden Queen. Outer petals creamy white; the center is golden yellow. Pkt. 25 cts.

ALYSSUM. The ever-popular and always satisfactory flower for edging beds or planting in porch-boxes or rockeries. Sow the seed in the open ground any time from early April to June. Blooms all summer.

White Sweet. The old-fashioned variety. Low-growing and spreading; sweet-scented; flowers pure white. Pkt. 5 cts., 1/2 oz. 15 cts., oz. 25 cts.

Little Gem. A dwarf form which makes dense, round, little bushes about 6 inches high, covered with white flowers; very fragrant; particularly fine for edging. Pkt. 10 cts., 1/2 oz. 25 cts., oz. 40 cts.

Procumbens. Carpet of Snow. Plants grow only a few inches high, and are covered with snow-white blossoms. Best for florists' use. Pkt. 10 cts., 1/2 oz. 30 cts., oz. 50 cts.

Saxatile compactum, Blanket of Gold. Hardy perennial, bushy plants a foot high, spreading 18 inches or so. Foliage rough, gray-green, covered in spring with millions of tiny bright yellow flowers in clusters. A good rock-plant. Pkt. 10 cts., 1/2 oz. 40 cts., oz. 75 cts.

AGERATUM.

This thrifty annual, sometimes called "Floss Flower," is splendid for low borders and edging, and is often used for porch-boxes. From seed sown outdoors in May, it comes into bloom in July and flowers continuously until frost, but to have blooms earlier start indoors in March.

Blue Perfection. Valued for its pretty, deep lavender-blue flowers which are borne in great profusion. The plants grow about 15 inches high. Pkt. 10 cts., 1/2 oz. 30 cts., oz. 50 cts.

Dwarf Blue. Low and compact, growing only about 10 inches high. Small, fluffy, azure-blue flowers. Fine for edging. Pkt. 10 cts., 1/2 oz. 30 cts., oz. 50 cts.

Grandiflorum. This new Ageratum surpasses all other varieties known to horticulture in its dwarf, compact habit and very long flowering period. The flowers are a beautiful blue which sometime changes to a slightly rosy tint. In combination with the original bright blue color this makes a marvelous effect. Pkt. 25 cts.

AMARANTHUS. Striking plants grown for their brilliantly colored foliage. The seed is usually started in the house or hotbed early in the spring, or in a special seed-bed outdoors later on, and the young plants transplanted when a few inches high to the place where they are to stand during the season.

Tricolor. Often called "Joseph's Coat." The plants are tall and erect, attaining a height of 5 feet in good soil. The luxuriant foliage is gorgeously marked with scarlet, yellow, and green. Pkt. 10 cts., 1/2 oz. 30 cts., oz. 50 cts.

ARCTOTIS Hybrida. Undoubtedly one of the most beautiful novelties introduced during the last few years. The large, showy, daisy-like flowers come in many beautiful shades, with a darker central disk. Leaves are crested and fringed, silvery beneath. The rich and abundant blooming of this plant makes it very desirable for cutting. Grows about 12 to 15 inches high. Pkt. 25 cts.

BALLOON VINE. A rapid-growing annual climber with dark green leaves and small white flowers, followed by curious balloon-like seed-pods. An interesting and desirable vine to grow on porch trellises. Sow the seed during late April or May. Sometimes grown in pots and porch-boxes. Pkt. 5 cts., 1/2 oz. 25 cts., oz. 45 cts.

BALSAM.

Everyone knows this old familiar flower by the name of "Lady's Slipper." The plants are tender when young so the seed should either be started inside or sown outdoors late in May when the soil and weather are warm.

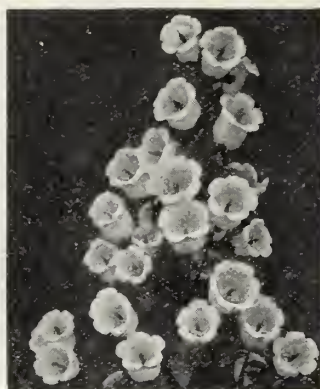
Double Varieties, Mixed. Large flowers, resembling camellias, in white, all shades of pink, scarlet, deep crimson, and purple, some of them attractively spotted and blotched. Pkt. 5 cts., 1/2 oz. 25 cts., oz. 45 cts.



Double-flowered Balsam



Giant Empress Candytuft



Canterbury Bells



Calliopsis

BEGONIA. The Begonias are great favorites, both as pot plants in the home in winter and for outdoor bedding during summer. Although tender and warmth-loving, they are true perennials, blooming profusely at all seasons, their masses of blossoms being set off by attractive foliage. The seed is fine and must be sown on well-prepared, rich soil in the greenhouse or in shallow boxes placed in a warm, sunny window.

Vernon. Brilliant deep scarlet flowers and glossy, bronze-colored leaves. Dwarf and bushy in growth. Pkt. 25 cts.

Prima Donna. Makes large, handsome plants, with a profusion of light rose-pink flowers and shining green foliage. Extra fine. Pkt. 25 cts.

Gracilis Luminosa. Large bright scarlet flowers. Pkt. 25 cts.

Mixed Everblooming Varieties. Pkt. 25 cts.

CALENDULA. The Calendulas or Pot Marigolds are among the brightest and easiest to grow of all garden annuals. They prefer a sunny location but will thrive on any soil and bloom continuously from early summer until late fall. Sow the seed during April or May and thin the plants to 8 to 10 inches. On good soil they grow 15 to 18 inches tall and make fine flowers for cutting.

Orange King. Extra-select Florist Strain. Large, double flowers of deep glowing orange. A favorite for cut-flowers. Pkt. 10 cts., $\frac{1}{2}$ oz. 60 cts., oz. \$1.



Calendula, Orange King

Lemon Queen. Like Orange King but the flowers are clear lemon-yellow. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

Double Mixed. Pkt. 10 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

CALLIOPSIS. Hardy, easy to grow, and free-blooming, Calliopsis is a favorite for cutting. The tall forms are good for mass planting, while the dwarf varieties are especially nice for edging beds or for planting in pots. Sow in April or May and thin to stand 6 to 8 inches apart.

Golden Wave (Drummondii). Medium tall, vigorous and bushy, covered with bright golden yellow flowers with brown centers. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

Dwarf Varieties, Mixed. Beautiful, compact plants about 8 inches high, with flowers in all shades of yellow, yellow with bronze markings, deep crimson, brown, and various combinations. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

CANARY BIRD VINE. A quick-growing, slender annual vine with light green, fern-like leaves and brilliant yellow flowers which some people imagine resemble a bird with half-extended wings. Sow late in May. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

CARDINAL CLIMBER. A slender, quick-growing annual vine with exceedingly ornamental, deeply cut leaves, and small, star-shaped flowers of a most brilliant cardinal-red color, borne in the greatest profusion. Sow after the weather and soil are warm. It is advisable to soak the seed for several hours before sowing. Pkt. 15 cts.

CANDYTUFT. One of the best of all low-growing annuals for beds and edging. Sow the seed early in the spring, and when the seedlings are strong enough, thin them to stand 6 to 8 inches apart. Candytuft grows best in a rich moist soil, blooming profusely for a long season.

Giant Empress. Undoubtedly the finest of the Candytufts, bearing quantities of extra-large, pure white flower-trusses. Nice for cutting as well as bedding. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

Umbellata. Charming bedding or edging plants which bloom quickly from seed. Sow where they are to bloom and thin to 6 inches apart. The flowers are in flat clusters and are produced for many weeks. **Lilac, Rose, and Crimson.** Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

Perennial Iberis gibraltarica Hybrids. A compact form with lilac flowers. Pkt. 10 cts.

Perennial or Evergreen (Iberis sempervirens). Bears pure white flowers in the spring, and the leaves are dark glossy green the year round. Fine for edging the perennial borders. Pkt. 10 cts.

CANNAS. Although the fine orchid-flowered varieties do not reproduce true from seed and must, therefore, be grown from the roots (for which see page 49), many people prefer to grow the old-fashioned Cannas or "Indian Shot" from seed. To insure the seed's sprouting, make an opening in the hard outer coat with knife or file and then place in damp moss. As soon as started, set out in a well-prepared seed-bed, and later transplant to stand at least 1 foot apart.

Large-flowered Dwarf Mixed. Saved from brilliantly colored varieties, including red, yellow, and various striking combinations. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

CANTERBURY BELLS. The Campanulas, or Canterbury Bells, are biennials, producing their best crop of flowers the second season. They are most effective massed in the borders and are sometimes grown in large pots. Sow the seed any time from early June to August, and protect the plants with straw or leaves over winter.

Single Varieties, Mixed Colors. The true "Canterbury Bells." White, Pink, and Blue. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

Cup-and-Saucer Bells. A very pretty double form. White, Pink, and Blue, mixed. Pkt. 15 cts., $\frac{1}{2}$ oz. \$1.25, oz. \$2.

CHRYSANTHEMUMS. Annual Chrysanthemums thrive in any sunny situation and bloom very freely.

Carinatum hybridum. Large semi-double, daisy-like flowers in many brilliant colors. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts.



Clarkia



Centaurea cyanus



Chinese Lantern Plant

CARNATIONS, MARGUERITE. An improved, large-flowering strain of "Pinks," blooming in three to four months after sowing. The flowers are very fragrant, and last for a long time when cut. The plants are perennial. Sow early in May.

Mixed Colors. Pink, White, Scarlet, Yellow, and Variegated. Pkt. 10 cts., ½ oz. 75 cts., oz. \$1.25.

ENFANT DE NICE. This annual Carnation has gained favor rapidly since it was introduced several years ago. The plants are robust and upright, with long, strong stems, bearing flowers 2½ to 3 inches in diameter. It is the last word in this popular flower. **Mixed Colors.** Pkt. 25 cts.

CASTOR BEAN. Extremely large annual plants that may be used for ornamental hedges, for the center of beds of cannas, and as individual specimens wherever a tropical effect is wanted. Sow in May.

Zanzibarensis. A giant strain with leaves often 2 to 2½ feet across. The plants sometimes grow 12 feet high and nearly as broad. Dark green, bronze, or reddish foliage. Pkt. 5 cts., ½ oz. 10 cts., oz. 15 cts.

Finest Varieties Mixed. Many different types varying in color of leaf, stalks, fruit, etc. All large. Fine for tropical effect. Pkt. 5 cts., ½ oz. 10 cts., oz. 15 cts.

CENTAUREA. A family of very popular and easy-to-grow flowers.

CYANUS. Familiarly known as "Cornflower," "Ragged Sailor," or "Bachelor's Button." About 1½ feet tall, thriving in almost any situation and blooming freely for a long season.

Double Blue. The finest strain of the favorite deep blue Cornflower. Pkt. 10 cts., ½ oz. 30 cts., oz. 50 cts.

Mixed Colors. Pink, White, Blue, and Variegated. Pkt. 10 cts., ½ oz. 25 cts., oz. 45 cts.

GYMNOCARPA (Dusty Miller). Grows but a foot high, is excellent for edging beds and borders, and will thrive in any location or soil. Foliage is fern-like and of silvery gray color. Flowers white. Pkt. 10 cts., ½ oz. 60 cts., oz. \$1.

CENTAUREA IMPERIALIS. The Giant Sweet Sultan, one of the largest of the Centaurea family and the finest for cut-flowers. The large blooms are borne on long stems and are very fragrant.

Mixed Colors. White, Pink, Lavender, Mauve, Purple, Rose, etc. Pkt. 10 cts., ½ oz. 30 cts., oz. 50 cts.

CHINESE LANTERN PLANT

(*Physalis Franchetii*). A perennial easily raised from seed. Flowers yellow with dark center which turn bright red when ripe and resemble Chinese lanterns. Pkt. 15 cts., ½ oz. 75 cts., oz. \$1.25.

CHINESE WOOLFLOWER

(*Celosia Childsii*). An easily grown annual that blooms continuously over a long season, producing a profusion of massive crimson-scarlet, wool-like flowers. None of the blooms fade until killed by frost, so that the whole plant is a mass of glowing color, resembling an enormous bouquet. Height 3 feet. Sow seed outdoors after danger of frost is past. Pkt. 10 cts.

CLARKIA. An attractive annual that does well in partially shaded as well as sunny spots, making loose, shrubby plants 2 to 3 feet high, covered with dainty flowers. Nice for cutting.

Improved Double, Mixed. A fine strain, including White, Pink, Salmon, Scarlet, etc. Pkt. 10 cts., ½ oz. 30 cts., oz. 50 cts.

COBÆA Scandens. An annual climber that grows quickly and makes a good screen of foliage. The flowers are large and bell-shaped, purple in color. Prefers a moist soil and should not be sown until mid-May. Sometimes called "Cathedral Bells." Pkt. 10 cts., ½ oz. 30 cts., oz. 50 cts.

COCKSCOMB. The Crested Celosias, or Cockscombs, produce large, brilliantly colored, comb-like heads. They make gorgeous beds and are useful also for borders where bright colors and mass effect are desired. The seed should be started indoors in April or sown in well-prepared soil outdoors late in May.

Finest Mixed Colors. Showy heads of Yellow, Orange, Scarlet, and Purplish Crimson. Pkt. 10 cts., ½ oz. 60 cts., oz. \$1.

COLEUS. Popular bedding plants grown for their ornamental variegated foliage. They are easily raised from seed carefully sown on fine soil in boxes indoors or in the greenhouse, and transplanted to the open late in May.

Rainbow Hybrids. A beautifully colored strain. Pkt. 25 cts.

COREOPSIS. No flower blooms more abundantly or for a longer season than Coreopsis. Its long stems and bright golden yellow color make it an ideal cut-flower as well as a showy addition to the hardy border. It is easily grown from seed sown any time during late spring or summer and, being perfectly hardy, the plants require no protection in winter and will live for years. Pkt. 10 cts., ½ oz. 30 cts., oz. 50 cts.

CYPRESS VINE. A graceful, slender annual climber with very finely cut foliage and bright little flowers which are produced in the greatest profusion. A warm, sunny spot and light, rich soil is preferred. Sow the seed after all danger from frost is past, first soaking it for several hours in warm water to ensure quick germination.

Mixed Colors. Flowers brilliant scarlet and pure white. Pkt. 10 cts., ½ oz. 30 cts., oz. 50 cts.



Carnation



Cosmos



Long-spurred Aquilegia



Shasta Daisies

COLUMBINE. The Aquilegias, or Columbines are favorite border perennials, blooming in May and June and thriving best in moist, partially shaded spots. The seed may be sown any time from May to August; the plants require no protection over winter.

Long-spurred Hybrids. These are the finest of the Columbines, producing large flowers in a great variety of delightful colors. Pkt. 10c., $\frac{1}{2}$ oz. \$1.25, oz. \$2.

COSMOS. The free-blooming habit, gracefully cut foliage make the Cosmos one of the most popular and satisfactory of flowers for late summer and fall use. The plants grow very tall and slender, and each plant will often produce over a hundred flowers. They should not be planted in a spot where they will be in shade during the greater part of the day. Practically any soil will grow good Cosmos. If possible, start the seed indoors in early March, as a long growing season is required. Otherwise, sow in the garden about May 1, and thin the plants to stand about 8 inches apart.

Mammoth Lady Lenox. One of the finest varieties of Cosmos ever produced. The blooms are of enormous size and of a most attractive shade of shell-pink. Tall-growing, blooming from early September until killed by frost. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

Mammoth Fine Mixed. Red, Pink, and White flowers of the giant, late-blooming type. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

Early-flowering, Mixed. A large-flowered strain which commences to bloom a month earlier than the preceding; the best to use for late sowings outdoors. The colors are White, Pink, Red, and Crimson. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

Double-crested, Late-flowering. After many years of selection a double-flowering form of Cosmos has been secured, and while the flowers vary in degree of doubleness, all are beautiful. We offer the following named sorts: **Pink Beauty** (soft rosy pink), **Crimson King** (deep rose-crimson), **White Queen** (pure white), pkt. 15 cts., $\frac{1}{2}$ oz. \$1.75, oz. \$3.

Double-crested, Finest Mixed (all colors), pkt. 15 cts., $\frac{1}{2}$ oz. \$1.25, oz. \$2.

DAHLIAS. It is quite easy to raise Dahlias from seed, provided it is started early in the spring in the hotbed or in a warm window in the house. Set the plants out late in May in a sunny location, spacing them a foot or more apart.

Double Varieties, Mixed. Composed of seed saved from some of the best named sorts. Fine new varieties are produced from seed, no two coming exactly alike in form and color. Pkt. 10 cts., $\frac{1}{2}$ oz. 85 cts., oz. \$1.50.

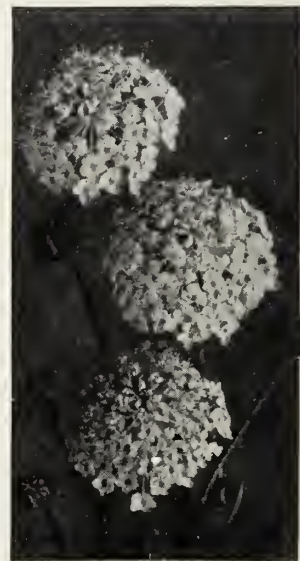
DAISY, AFRICAN ORANGE. A very bright and thrifty annual for bedding, growing well even on poor soil. The plants are about 8 inches high, bushy and spreading, producing

quantities of flowers in various shades and combinations of yellow and orange. Pkt. 10 cts., $\frac{1}{2}$ oz. 60 cts., oz. \$1.

ENGLISH DAISY. A hardy biennial very useful for low beds and borders, thriving in partial shade as well as sun and preferring a fairly moist spot. If the seed is sown very early in the spring and plants thinned to stand about 6 inches apart, they will bloom the first summer. For very early bloom, sow in a hotbed or coldframe in January or February. Give the plants light protection over winter.

Double Varieties, Mixed. Large, deep, double flowers ranging from white to dark crimson. Fine imported seed. Pkt. 10 cts., $\frac{1}{2}$ oz. \$1, oz. \$1.75.

SHASTA DAISY. Produced by Luther Burbank and recently selected as the official flower of the American Legion, the Shasta Daisy is one of the loveliest of our easily grown hardy perennials. The flowers measure $2\frac{1}{2}$ to 4 inches across, white with yellow center, resembling a giant field daisy. The stems are stiff and strong; fine for cutting, lasting for two weeks or longer in water. Pkt. 10 cts., $\frac{1}{2}$ oz. \$1.50, oz. \$2.75.



Didiscus cærulea

DIDISCUS Cærulea. Blue Lace Flower. Exquisite, lacelike flower-heads of dainty azure-blue, gracefully borne on long stems. Sow seed in March in hotbed and outdoors in May and June and you will have lovely blooms to cut until frost. Pkt. 10 cts., $\frac{1}{2}$ oz. 60 cts., oz. \$1.

EUPHORBIA. Showy plants growing about 2 feet high, with ornamental foliage, easily grown from seed which should be sown during May. The plants may be thinned to stand about 6 inches apart.

Variiegata. "Snow-on-the-Mountain." Leaves deep green, bordered and marked with white. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

DELPHINIUM. The finest of blue flowers for the hardy border are the Delphiniums, or Perennial Larkspurs. They send up spikes, 4 to 5 feet tall, blooming all summer. Sow the seed in May or June and transplant about 1 foot apart in early September. Perfectly hardy.

Belladonna. Long, loose spikes of delicate light blue flowers, of supreme value for cutting, and an excellent garden plant. Belladonna blooms almost continuously if the flower-spikes are kept cut. Pkt. 25 cts., $\frac{1}{2}$ oz. \$1.50, oz. \$2.75.

Bellamosa. This is a taller, straighter plant than Belladonna, and the flowers are rich clear blue, several shades darker. Very striking and handsome. Pkt. 25 cts., $\frac{1}{2}$ oz. \$1.75, oz. \$3.

Wrexham (Hollyhock Strain). Sturdy plants producing conical spikes of flowers 2 inches across or more, and $2\frac{1}{2}$ to 3 feet long. The colors range from clear light blues and lavenders to shades of deep blue, purple, and mauve. This is the supreme development in Delphiniums to date, and has become very popular. Selected seedlings are sometimes sold at extremely fancy prices, but plants just as good may be raised from this good strain of seed. Pkt. 25 cts., $\frac{1}{2}$ oz. \$2.25, oz. \$4.

Kelway's Gold Medal Hybrids. A famous English strain of great size and vigor, producing flowers in all shades of blue. Pkt. 25 cts., $\frac{1}{2}$ oz. 75 cts., oz. \$1.25.



Eschscholtzia

ESCHSCHOLTZIA. Better known as "Poppies," these hardy little annuals make very bright beds and bloom from June until frost. The foliage is bluish green in color and delicately cut; the flowers resemble single Poppies but come in a greater variety of colors. The plants are bushy and grow about 8 inches tall.

Mixed Colors. Deep golden yellow, bright orange, primrose, rich crimson, white, rose and various other shades and combinations. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

FORGET-ME-NOT. The familiar blue Forget-me-not, or *Myosotis*, is a biennial but it will bloom the first summer from seed sown in early spring. If early spring flowers are wanted, sow in July and transplant the young plants to their permanent

bed about the middle of September. A partially shaded location and moist soil give best results. Pkt. 10 cts., $\frac{1}{2}$ oz. 85 cts., oz. \$1.50.

FOUR O'CLOCK. Four o'Clocks, or old-fashioned "Marvel of Peru," make most effective beds and annual hedges. The plants grow about 2 feet tall, broad and bushy, with lustrous dark green leaves and quantities of fragrant flowers which open late in the afternoon and remain open all night, closing again the next morning. Sow in April or early May and thin plants to stand about 1 foot apart. Four o'Clocks will grow vigorously in any sunny spot.

Mixed Colors. Flowers White, Yellow, Lilac, Pink, and all shades of Red, some beautifully striped and splashed. Pkt. 5c., $\frac{1}{2}$ oz. 10c., oz. 15c., $\frac{1}{4}$ lb. 50c., lb. \$1.50.

FOXGLOVE. The tall spikes of Digitalis, or Foxglove, with their long, thimble-shaped flowers, are most effective massed in the borders with a background of shrubbery or among lower-growing flowers. The plants send up stems 3 to 4 feet tall, the upper part crowded with blossoms. Immediately after blooming, remove the flower-stalk and some of the larger leaves at the base; this will result in a number of new plants which start from the old crown and will produce flowers the next year. Sow the seed in late May or June and transplant in the fall, spacing the plants 10 to 12 inches apart.

Mixed Colors. White, Pink, and Purple flowers, spotted with deep crimson or chocolate in the throat. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

GAILLARDIA. The Gaillardias, or "Blanket Flowers," are extra-good bedding plants. They are vigorous and bushy, producing their large, showy blooms all summer long.

The Dazzler. Very large, wheel-like flowers of blazing orange-scarlet, an intense, pure color, illumined by a brilliant yellow edge at the tip of each ray or petal. This is the largest and handsomest of the "red" Gaillardias. Stems are long, stout, and hold up the flowers in all weathers. Splendid for cutting. Pkt. 25 cts., $\frac{1}{2}$ oz. \$1.25, oz. \$2.

Grandiflora. A perennial variety which, if given a little protection over winter, will live in the garden for years. The flowers are large and very bright, coming in orange-yellow, scarlet, and crimson, and various combinations of red and yellow. Desirable for cutting as well as garden display. Sow seed in May and space the plants about 1 foot apart. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

GLOBE AMARANTH. The Gomphrena, or Globe Amaranth, is one of the "straw flowers" or "everlastings" so popular for winter bouquets. The plants grow 2 to 3 feet tall, with globe-shaped flowers which may be cut and dried in their natural colors. Sow in April or May and thin to about 8 inches apart.

Mixed Colors. White, Pink, and Purplish Crimson. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.



Delphinium



Four o'Clocks



Helichrysum



Kochia. See page 39



Hollyhocks



Gypsophila

GERANIUM. Great favorites for bedding and window-boxes. Seed saved from the choicest varieties. Pkt. 25 cts., $\frac{1}{2}$ oz. \$1.75, oz. \$3.

GODETIA. These are very brilliant, free-flowering annuals that seem to prefer a rather poor, heavy soil. Sow the seed in April and thin to stand about 10 inches apart. The plants are bushy, with attractive foliage, and the flowers are quite large, somewhat resembling single hollyhocks. Gardeners who have not grown Godetias should try them, as they make most attractive beds and borders.

Dwarf Compact, Mixed. The most improved type, with flowers White, Pink, Red, Deep Crimson, and Red and White. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts.

GOURDS. Some of the Gourds are ornamental in fruit as well as foliage and are excellent for covering old fences or stumps and trailing on trellises and arbors; other kinds produce fruit useful in various ways; and all are interesting to grow. Sow the latter part of May.

Dish-Rag. Sometimes called Sponge Gourd. The inside of the ripe fruit is like a tough, fibrous cloth or sponge. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 60 cts.

Dipper. The ripe fruits, cut away and cleaned out, make very serviceable dipper. They are often seen in the country, hanging by "the old oaken bucket." Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 60 cts.

Ornamental Varieties, Mixed. Includes a great number of interesting and diverse forms of Gourd. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 60 cts.

GYPSOPHILA. The annual Gypsophila, or "Baby's Breath," is largely used in making up bouquets and is a most attractive adjunct to the cut-flower garden. The plants are large and bushy, with feathery foliage and little star-shaped flowers, growing thriftily in any garden. Sow in April or May and thin to 1 foot.

Elegans, White. Pure white flowers. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

HELICHRYSUM. This is the best of the "Straw Flowers," exceedingly popular for its bright, lasting colors. The flowers are borne on long stems and are often 2 to 3 inches in

diameter. Sow in April or May and thin to 10 inches apart. To preserve the flowers for permanent bouquets, pick them when half opened and hang them by the stems, head down, to dry in a shady place.

Monstrosum, Mixed. Giant, double flowers, in an assortment of colors, including Reds, Yellow, Orange, Carmine, Violet, etc. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

HELIOTROPE. The old favorite, prized for its delightful fragrance. It is a tender perennial that can be grown in pots or in the garden. Start the seed indoors in March and transplant to the garden late in May, or sow outdoors in a finely prepared seed-bed after the soil and weather are warm. The plants may be cut back in September, potted up and taken in the house for winter.

Extra-Fine Mixture of Dwarf Varieties. Pkt. 15 cts., $\frac{1}{2}$ oz. \$1.75, oz. \$3.

HOLLYHOCK. The Hollyhocks need no description. Wherever tall-growing plants can be used they are wonderfully effective, with a charm all their own. They are biennials or perennials and the seed is best sown in July or August for blooming the following summer. The plants should be given a light protection of leaves the first winter. Almost any soil will do, but they bloom most freely and continuously on a deep, loamy soil and in a sunny situation.

Finest Double Varieties, Mixed. This extra-fine strain grows 5 feet tall and produces large, double flowers in White, Yellow, all shades of Pink and Red, and Maroon. Pkt. 10 cts., $\frac{1}{2}$ oz. 60 cts., oz. \$1.

JAPANESE HOP. A very rapid-growing annual vine which, on account of its dense, attractive foliage, is valuable for porch-screens and arbors. It is not particular as to soil and will stand hot, dry weather. The growth is thicker and the leaves broader than the common hop of commerce.

Green-leaved. The ordinary form of Japanese Hop. Pkt. 10 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

Variegated-leaved. Leaves splashed with green on white ground. Pkt. 10 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

HUNNEMANNIA. A very desirable flower of the poppy family, sometimes called Giant Yellow Tulip Poppy. The plants are bushy and grow $1\frac{1}{2}$ to 2 feet tall, with bluish green, finely cut leaves and many bright yellow flowers, 3 to 4 inches across, blooming all summer. Sow the seed early in the spring, and thin to stand at least $1\frac{1}{2}$ feet apart. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

HYACINTH BEAN (*Dolichos Lablab*).

A very pretty annual climber which quickly grows to a height of 8 to 10 feet and bears quantities of clustered flowers which resemble pea blossoms, followed by lustrous purple pods. Ornamental and useful wherever a dense shade is not needed. Sow the seed in late May, preferably in light, dry soil.

Mixed Colors. Flowers White and Deep Lavender. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

JOB'S TEARS. An ornamental grass which grows 2 to 3 feet high and bears large, ivory-white seeds from which it gets its name. The children enjoy making necklaces from the hard seeds. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

KOCHIA. A very attractive and symmetrical annual hedge plant, also known as "Summer Cypress" and "Burning Bush." It grows about 2 feet high, making beautifully rounded bushes which resemble clipped evergreens. During the summer the foliage is bright, light green but in the fall the color changes and, in the course of a week or two, the whole plant is a ball of crimson. It will grow on almost any soil but thrives best in full sun. Sow the seed during the latter part of May and thin or transplant the plant when a few inches high to stand about $1\frac{1}{2}$ feet apart. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

LOBELIA. Dainty little plants, popular for porch-boxes, vases, and low beds. They should have a deep, moist soil and the seed should be started indoors in February or March and the plants set out in May.

Crystal Palace Compacta. Rich dark blue flowers; dark green foliage; dwarf and compact in growth. Pkt. 10 cts., $\frac{1}{2}$ oz. \$2.25, oz. \$4.

LARKSPUR. Favorite, easy-to-grow annuals, producing their tall spikes very freely for several weeks during summer. They are most effective planted in the border in groups among lower-growing flowers. Sow the seed in April and thin or transplant to stand 8 to 10 inches apart.

Miss California. (*New.*) Tall plants with double flowers of brilliant rose-pink. A less harsh shade than Carmine King—but strong enough to attract much favorable notice. Pkt. 25 cts.

Carmine King. (*New.*) A compact plant with spikes 30 inches high, thickly studded with double flowers of deep, glowing pink with a fiery sheen almost scarlet. A vivid, showy variety. Pkt. 25 cts.

Blue Spire. Long, spire-like stems, closely set with single clear, violet-blue flowers. Very graceful, and a fine blue shade. Pkt. 25 cts.

Double Dwarf Rocket, Mixed. The plants of this free-blooming dwarf strain grow about $1\frac{1}{2}$ feet tall. The colors include Light and Dark Blue, White, Pink, Carmine, and Violet. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

Tall Double Stock-flowered, Mixed. Plants 3 feet tall, with candelabra-like branches and long spikes closely set with large, double flowers. Light and Dark Blue, White, Pink, Carmine, and Violet. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

LILIES (*Lilium*). Everybody likes Lilies, but few realize how easily some of the finest varieties can be grown from seed.

Regale. Most popular and easiest to grow of all Lilies, flowering abundantly within 18 months from seed. The plants are 2 to 4 feet high, bearing clusters of 7 to 15 enormous, trumpet-shaped, fragrant flowers at the top. They are purple-stained on the outside of the bud, opening to a white bloom of inexpressible beauty and purity, with a rich yellow glow in the center. Perfectly hardy. Pkt. 25 cts.

Tenuifolium. The Coral Lily of Siberia. Grows 2 feet high, with scarlet flowers in a big spray at the top. The recurved petals have an exquisite waxy texture. It is a wonderful cut-flower and splendid plant for the rock-garden. The seed can be sown in the open where the soil is mellow, or in a mixture of part sand, part leaf-mold, and part humus. It germinates quickly. Most of the seedlings will bloom the second year; some in the first. One of the earliest Lilies to flower. Perfectly hardy. Pkt. 25 cts., $\frac{1}{2}$ oz. \$1.75, oz. \$3.

LUPINS. The Lupins, or "Sun-dials," as they are sometimes called, are fine for planting in moist or partly shaded spots, although they will not thrive in a sour soil. They make bushy plants with very attractive leaves and long spikes, closely set with blossoms. Give them plenty of lime, wood-ashes, bone-meal, or other soil-sweetening fertilizers.

Polyphyllus. A hardy perennial form which grows $2\frac{1}{2}$ to 3 feet tall, and comes in White, Pink, and Lavender-Blue. Sow in May or June and thin to $1\frac{1}{2}$ feet apart. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

MESEMBRYANTHEMUM

Crystallinum (Ice Plant). The Ice Plant is a low-growing annual with tender stems and leaves, portions of which are transparent and resemble little icicles. It is interesting and valuable for basket and vase-planting, and for edging beds of taller-growing plants. Sow the seed after all danger from frost is past and thin or transplant to 8 to 10 inches apart. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

Tricolor. A low-growing plant for dry, sunny places. Flowers brilliant red and white, with a black center. Very beautiful when in full bloom. Pkt. 25 cts.



African Marigold. See page 40



Lupins



Larkspur



Golden Gleam Nasturtiums

MARIGOLD. Vigorous, free-blooming annuals, thriving on any soil but preferring plenty of sunlight. They are prized for their brightly colored flowers which are set off by handsome, very dark green foliage. The African Marigolds grow about 2 feet tall with immense globular blooms, while the French kinds are only about 10 inches high with smaller flowers but more of them.

African Orange Prince. Very large and double; deep glowing orange. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts.

African Lemon Queen. A companion to Orange Prince, but clear lemon-yellow. These two varieties, planted on rich soil, produce enormous flowers. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts.

African Double, Mixed. Shades of orange and yellow. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts.

French Dwarf, Mixed Colors. Double flowers; orange and yellow variously striped and marked with reddish brown. Splendid for edging beds. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

MIGNONETTE. Highly valued for its distinct fragrance.

It can be grown in the garden, or in pots in the house any time during the year. For outdoor plants, sow the seed about May 1, in a dry, sunny spot. By shading the plants during midsummer, the season of bloom may be prolonged until late fall.

Common Sweet. Small flowers but very free-blooming and extremely sweet-scented. Pkt. 5 cts., $\frac{1}{2}$ oz. 10 cts., oz. 15c.

Giant Machet. A much-improved florists' strain with giant spikes of reddish green florets. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

MIMULUS. Various known as "Musk Plant" and "Monkey Flower." They are dwarf, inclined to trail, and profuse in bloom, the flowers bearing a resemblance to a mask or face. Nice for baskets and vases.

Moschatus. Musk-scented foliage and small yellow flowers. Pkt. 10 cts., $\frac{1}{2}$ oz. \$5, oz. \$9.

MOMORDICA. Vigorous climbing vines with ornamental fruits, and foliage that is dense enough to make a pleasant shade.

Charantia (Balsam Pear). Grown by the Chinese under the name of "La-Kawa." The pear-shaped fruits are edible and are usually prepared by boiling before they are fully ripened. Pkt. 10 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

Balsamina (Balsam Apple). More slender and graceful than the Balsam Pear. Flowers yellow, with dark centers; fruits orange, round and about 3 inches in diameter, sometimes dried and used in medicinal preparations. Pkt. 10 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

MOONFLOWER. Quick-growing, slender vines with big, round blossoms that open in the evening and are closed during the day. They succeed best if the seed is sown indoors. Do not sow outdoors or set out plants until all danger from frost is past.

Grandiflora Alba. Clear white flowers, 4 to 5 inches in diameter. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts.

Heavenly Blue. Flowers of a most attractive shade of sky-blue, shaded with rose at the edges. Sometimes grown in pots. Pkt. 10 cts., $\frac{1}{2}$ oz. 60 cts., oz. \$1.

MORNING-GLORIES. Fine for covering fences and trellises on account of their rapid, luxuriant growth. They bloom freely all summer. Sow in late April or May.

Fine Mixed. The common Morning-Glories in a splendid assortment of colors, including Light and Dark Blue, Rose, Bright Red, Violet, and Variegated. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

Giant Japanese. A strain of Morning-Glories with extra-large flowers of unusually fine colors. White, Pink, Mauve, Chocolate, Purple and various other attractive colors. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

MOURNING BRIDE. It is a pity this flower does not have a more pleasing name, for it is one of the finest annuals for cutting. It will grow in almost any situation, attaining a height of $1\frac{1}{2}$ to 2 feet and blooming for a long season. The flowers are carried on fine long stems.

Mixed Colors. White, Pink, Scarlet, Crimson, Lavender, and Blackish Maroon. Pkt. 15 cts., $\frac{1}{2}$ oz. 60 cts., oz. \$1.

NASTURTIIUMS. We know of no flowers that are easier to grow or give more general satisfaction than Nasturtiums. They will thrive on any soil—in fact, they seem to bloom most freely on soil that is only moderately good—and they flower all summer long in all kinds of weather. Sow the seed in April, scattering it sparingly so that no thinning will be required, in drills about an inch deep.

Golden Gleam. Compact plants 12 to 18 inches high, with clear, golden yellow, double flowers. One of the most unusual things among recent novelties which has attracted notice in every quarter. In addition to the remarkable doubling of the bloom, the flowers possess a delicate scent which lacks the usual coarseness of the Nasturtium odor. We believe this to be the outstanding American contribution to the annual list of this year. Pkt. 25 cts.

Dwarf Varieties, Fine Mixed Colors. The dwarf or "Tom Thumb" Nasturtiums are fine for beds and edging, any place where masses of color are desired. The plants grow 10 to 12 inches high, rounded and bushy, and covered with flowers from June until frost. The colors range from Straw-Yellow to Deep Orange and from Delicate Rose to Dark Crimson and Maroon, as well as Red and Yellow Bicolors. Pkt. 5c., oz. 10c., $\frac{1}{4}$ lb. 30c., lb. \$1.

Tall Varieties, Fine Mixed Colors. The tall or climbing Nasturtiums are useful for covering fences and low trellises, or may be allowed to trail over stumps and rockwork. The flowers and leaves are larger than in the dwarf type and the colors are, if possible, even more varied and brilliant. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 30 cts., lb. \$1.

NICOTIANA. Fine annuals for the tall border, thriving best on a deep, rich soil. They grow about 2 $\frac{1}{2}$ feet high, with large, attractive foliage at the base and clusters of delicately fragrant, trumpet-shaped flowers on long stems. It is best to start the seed indoors in March as the young plants are quite tender, but the seed may be sown in fine soil outdoors after all danger from frost is past. Often called "Sweet-scented" or "Flowering Tobacco."

Affinis. A vigorous form which bears quantities of fragrant, blush-white blossoms that open during the early morning and evening. Easy to grow from seed. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

Sanderæ Hybrids. The flowers are larger than the preceding and come in white and shades of pink and red. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts.

NIGELLA. A very interesting and pretty annual, nice for bedding and cutting, easily and quickly grown from seed in any sunny spot. It has finely cut foliage and a curious network of bracts about the flowers, which are followed by odd seed-pods. Sow the seed in April or May and thin to stand 8 inches apart. Grows a foot high.

Blue (Miss Jekyll). Fine double azure-blue flowers. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

White. Flowers pure white. Double. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.



Cassier's Giant Pansy

PANSIES

To grow the finest and largest Pansies, remember plants thrive best in cool weather; sow seed at a time that will bring them into bloom very early in the spring or fall. Without a doubt, the best results are secured by sowing in late July or August and protecting the young plants over winter with a covering of strawy manure or a deep blanket of leaves. They will then be ready to begin blooming as soon as the weather opens up in the spring and will continue to flower until hot weather. The next best time to sow is very early in the spring, in February or March, starting the seed in a box indoors or in a coldframe and setting the plants outdoors the latter part of April. Pansies should be given plenty of room, at least 8 inches between plants, and good cultivation, also a liberal supply of water during dry weather. If set out in a spot that is shaded part of the day, where the soil is deep and moist, and the flowers picked daily, the plants may be kept blooming all summer, but the flowers always run small in hot weather. Fall-blooming plants are secured by sowing in June or early July.

Fine Mixed Colors. A splendid assortment of select English, French, and American varieties for bedding, including many bright and beautiful colors. Pkt. 10 cts., $\frac{1}{2}$ oz. \$1.50, oz. \$2.50.

Cassier's Giants. A famous French strain of very large-flowered Pansies, all of them of the popular "faced" or blotched type. The colors and markings are gorgeous. The plants are very vigorous and carry their flowers erect on long, strong stems. Pkt. 20 cts., $\frac{1}{2}$ oz. \$4, oz. \$7.

Steele's Mastodons. This is a fine American selection which produces the largest Pansies of all, the flowers often measuring $2\frac{1}{2}$ inches in diameter. The plants are large and sturdy and exceptionally free-blooming. The colors are magnificent, including many fine reds and purples. An ideal strain for florists' use as well as home-gardens. Pkt. 20 cts., $\frac{1}{2}$ oz. \$4, oz. \$7.

Giant Colossal Record. Flowers enormous and in many respects superior to all other varieties. Richly colored selfs and varieties with large spots of contrasting shades. Robust stems; thick and weather-resistant petals. **Mixed Colors.** Pkt. 25 cts.

PERENNIAL PEAS. Hardy climbers, attaining a height of 5 to 6 feet each season and living

from year to year. They bear quantities of flowers that resemble the old-fashioned Sweet Peas except that they have no fragrance. They grow well on stone walls, fences, and low trellises.

Mixed Colors. Including Red, Rose, and White. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts.



New Fringed Petunias

PETUNIAS

For solid beds of color, borders and edging, vases and porches; in fact for every purpose except cutting, the Petunias are surpassed by few if any of the easily grown garden annuals. They come into bloom early and continue to flower profusely all summer long, thriving on poor soil and in the hottest weather. Sow the seed in April or May, scattering it thinly on fine sifted soil and, instead of covering it, press it firmly into contact with the earth with a smooth board. When the seedlings are about 2 inches high, transplant them to the place where you want them to bloom.

Dwarf Inimitable. Round, bushy plants growing about 7 inches high, covered with single flowers of maroon, crimson, and rose, all striped or starred with pink or white. Very free-blooming and fine for low beds and edging. Pkt. 10 cts., $\frac{1}{2}$ oz. 75 cts., oz. \$1.25.

Rosy Morn. Vigorous plants, 10 inches tall, compact and free-flowering. Flowers soft carnine-pink with white throat. Pkt. 10 cts., $\frac{1}{2}$ oz. \$1.25, oz. \$2.

Rose of Heaven. Dwarf; brilliant fiery rose, similar to Rosy Morn, but more brilliant. Pkt. 10 cts., $\frac{1}{2}$ oz. \$1.25, oz. \$2.

Single Varieties, Fine Mixed. A splendid assortment of Petunias for bedding, including many fine colors. Pkt. 10 cts., $\frac{1}{2}$ oz. 75 cts., oz. \$1.25.

Double Fringed, Mixed. A magnificent strain produced by careful hand hybridizing. The flowers are large and have beautifully frilled and crinkled petals. A large percentage will come double. These Petunias make splendid pot plants. Pkt. 50 cts.

New Fringed Petunias

This new strain was originated by a famous American Petunia specialist. The plants are robust and free-blooming.

White Beauty. Snowy white.

Pride of Portland. Deep glowing rose.

Pink Beauty. Clear light pink.

Scarlet Beauty. Crimson-scarlet.

Elk's Pride. Violet-purple; large and usually plain edged instead of fringed.

Above varieties, each, pkt. 25 cts.

Ruffled Giants, Mixed Colors. Immense single flowers with ruffled and fringed petals, in all colors. Pkt. 25 cts.

Dwarf Superbissima Giant, Mixed. The largest flowering Petunia of the Grandiflora or ruffled class. Very dwarf plants with giant flowers in a remarkable variety of colors. Pkt. 25 cts.



Portulacas



Shirley Poppy



Perennial Grass Pinks

ANNUAL PHLOX, DRUMMONDII.

Blooming in mid-summer, these easily grown flowers make the most brilliant of beds. They prefer an open, sunny situation, but are not particular as to soil and will give good results under almost any conditions. Sow the seed in April or early May and thin the plants to stand about 4 inches apart. For extra-early flowers start the seed in hotbed or coldframe.

Tall Finest Mixed. A gorgeous variety of colors, including Primrose, White, Pink, Carmine, Blood-Red, Violet, etc., many with distinct white centers. About 15 inches tall. Pkt. 10 cts., 1/2 oz. 75 cts., oz. \$1.25.

Dwarf Compact Mixed. These grow about 8 inches high and quite bushy, making fine borders and ribbon beds. Pkt. 10 cts., 1/2 oz. \$1.25, oz. \$2.

HARDY PHLOX. Perennial, producing large heads of brilliantly colored flowers of many shades. 2 to 4 feet high. Pkt. 15 cts., 1/2 oz. \$2, oz. \$4.

ANNUAL PINKS. The annual Chinese or Japanese Pinks are very thrifty and attractive garden flowers, coming in a wide assort-

ment of forms and colors, and succeeding on any garden soil. They are nice for cutting. Seed sown in April will give blooming plants early in July.

Japanese Single Mixed. An improved strain, producing large, fringed, brightly colored flowers. Pkt. 10 cts., 1/2 oz. 30 cts., oz. 50 cts.

Chinese or Indian Double Mixed. These double forms resemble carnations but they come in a remarkable variety of colors, including many flowers with distinct stripes and borders. Pkt. 10 cts., 1/2 oz. 40 cts., oz. 75 cts.

PERENNIAL GRASS PINKS.

The Pheasant-Eye, Grass or Clove Pink of the old-fashioned garden, or *Dianthus plumarius* of the botanist, is one of the most pleasing of our low-growing hardy perennials. The plants grow 8 to 10 inches high, with grass-like foliage, and produce in early spring quantities of fringed white or light pink flowers with crimson centers, distinctly clove-scented. On deep, moist soil they will live and increase from year to year with almost no care. Easily grown from seed, sown any time from April to August. Pkt. 10 cts., 1/2 oz. 40 cts., oz. 75 cts.

POPPIES.

Although the Poppies last for only a short time, while they are in bloom no flowers can rival them in brilliant colors. The seed is fine and should be scattered thinly in the place where the plants are wanted to bloom, as they do not transplant well. Thin if necessary to give each plant room to develop. Sow the annual sorts in April and the perennial kinds June to September. Require plenty of space.

Shirley, Mixed Colors. Probably the finest strain of annual, single-flowered Poppies. They grow 12 to 15 inches tall and the flowers range in color from white and pale pink to bright scarlet and deep crimson, including rose with white edge, red with white edge, etc. Very showy. Pkt. 10 cts., 1/2 oz. 30 cts., oz. 50 cts.

The Tulip Poppy. The brightest color in annual Poppies. Vivid scarlet flowers somewhat resembling a big tulip; bluish foliage. Pkt. 10 cts., 1/2 oz. 30 cts., oz. 50 cts.

Double-flowered, Mixed Colors. Big, shaggy, ball-shaped flowers on 2-foot stems, including all of the ordinary Poppy colors, as well as Mauve, Purple, Maroon, etc. Extra-fine. Pkt. 10 cts., 1/2 oz. 20 cts., oz. 35 cts.

Iceland Poppy, El Monte. Exceedingly showy flowers of silken texture and a dazzling orange hue so intense it hurts your eyes. The plants bloom from seed the first year, and a large percentage will live over winter to bloom in succeeding seasons. Pkt. 25 cts.

Iceland Poppy, Mixed Colors. Perennial plants forming mats a foot across with slender stems and large silky flowers in shades of yellow, white, and orange. Pkt. 10 cts., 1/2 oz. \$1.25, oz. \$2.

Oriente. The big, bright scarlet Decoration Day Poppy. A hardy perennial form bearing immense single flowers in spring. It should be in every garden. Pkt. 10 cts., 1/2 oz. \$1.25, oz. \$2.

PORTULACA.

The Portulacas will grow on soil too poor and in places too hot and sunny for any other flower. The plants are low and spreading, commencing to bloom in July and blooming profusely all summer. Sow the seed in late April or May and thin the plants to stand 6 to 8 inches apart. The plants may be moved when in full bloom.

Single, Mixed Colors. Includes White, Yellow, Orange, Pink, Carmine, Scarlet, etc. Very bright and attractive. Pkt. 5 cts., 1/2 oz. 60 cts., oz. \$1.

Double, Mixed Colors. The flowers resemble miniature roses. All colors. Pkt. 10 cts., 1/2 oz. \$1.75, oz. \$3.

Double Grandiflora, Mixed. Upright stems. Different from the other varieties because of its upright, compact habit, growing in a distinct tuft. Pkt. 25 cts.

HARDY PRIMROSES.

These are fine free-blooming flowers for the rockery and perennial borders. They seem to do best in dry soil and will stand some shade. Sow the seed inside in February or early March and transplant to the open ground in April. Give the plants light protection over winter for the first year or two.

Finest Mixed Colors. Many shades and colors, the majority with distinct "eyes" or centers. Pkt. 10 cts.



Phlox Drummondii



Salvia splendens



Golden Chrysanthemum-flowered Sunflower



Sweet William. See page 44.

PYRETHRUM. Hardy perennial plants

very easy to grow from seed sown any time from early spring to late summer. Seed started under glass in February will give blooming plants the first summer. By cutting off the first crop of flowers a second crop will be produced in the fall.

Double White or Feverfew. Ball-shaped, creamy white flowers that are fine for cutting and make a splendid showing in the garden. Pkt. 10 cts., 1/2 oz. 25 cts., oz. 45 cts.

Golden Feather. Grown mostly for its showy golden yellow lacinated foliage. Nice for borders. Pkt. 10 cts., 1/2 oz. 25 cts., oz. 45 cts.

Roseum, Single and Double Mixed. Painted Daisy. These include all shades from deep red to white. Pkt. 15 cts., 1/2 oz. \$1.75, oz. \$3.

RHODANTHE. One of the so-called "Everlastings" that can be dried in its natural colors for winter bouquets. It is an easily grown annual, about 1 1/2 feet tall, with silvery gray leaves and very pretty, little, double flowers.

Mixed Colors. White, Pink, and Crimson. Pkt. 10 cts., 1/2 oz. 40 cts., oz. 75 cts.

SALPIGLOSSIS. A popular, easily grown garden annual, richly colored and fine for cutting. The flowers are borne in clusters at the top of long stems and are produced very freely from midsummer to fall. Sow the seed in late April or May and thin the plants to stand about 10 inches apart.

Dwarf Varieties, Finest Mixed Colors. These grow about 2 feet tall. The flowers range from White, Rose and Pale Blue to Deep Red and Violet, beautifully penciled with gold on the petals and with darker shadings in the throat. Pkt. 15 cts., 1/2 oz. 60 cts., oz. \$1.

SALVIA. The Scarlet Salvia, or Flowering Sage, makes the most gorgeous masses of flaming red found in all nature. For formal beds, for grouping in front of porches and for similar purposes, it is exceedingly popular, requiring

little care after the plants are established, and blooming profusely from June until killed by frost. Start the seed indoors or in hotbeds very early, during January or February if possible. Give the seedlings plenty of light, warmth, and water, and when they are 2 to 3 inches high transplant them into small pots or space them out to stand 6 inches apart. Transplant them to the garden in late May, giving them a sunny location and rich, deeply dug soil if possible, setting the plants at least 1 1/2 feet apart.

Splendens. The original Scarlet Sage. It grows about 2 feet tall and is covered with large, bright red blossoms all summer long. Pkt. 10 cts., 1/2 oz. \$1.75, oz. \$3.

Bonfire. A select strain, fine for mass planting, as it is very compact in growth and has exceedingly brilliant extra-large flowers. Pkt. 10 cts., 1/2 oz. \$2, oz. \$3.50.

America. Considered to be the finest of all, particularly for low beds and borders as it grows only about 1 1/2 feet tall. It is an exceptionally profuse and constant bloomer, the plants a mass of light blazing scarlet. Pkt. 10 cts., 1/2 oz. \$3, oz. \$5.

SNAPDRAGONS (*Antirrhinum maximum*).

Finest for cutting. Stems 2 to 3 feet long. Free-blooming garden favorites, of the easiest culture, and producing their beautiful flowers all summer long. Sow the seed in the garden in April and when the plants are 2 to 3 inches high, thin or transplant them to stand 10 to 12 inches apart in rich, well-fertilized soil where they can be given plenty of water. Early spring flowers may be secured by sowing in July or August and protecting the plants over winter like pansies, or they may be cut back and potted up in the fall to bloom indoors. No flower-garden is complete without these handsome flowers.

Peach Glow. Soft, peachy or creamy pink.

The Rose. Vivid dark rose-color.

Old-Gold. Glowing yellow with bronze tones.

Mixed. All colors, White, Yellow, Scarlet, Pink, Purple, Crimson, and many handsomely spotted or mottled varieties.

All, pkt. 25 cts., 1/2 oz. \$1.75, oz. \$3

Large-flowering Half-Dwarf Varieties, Mixed. These are the best sorts for outdoor bedding and nice for cutting. They grow about 15 inches tall and the flowers come in a great wealth of beautiful colors, including all shades of Pink, Salmon, Mauve, Orange, Red, White, and Yellow. Pkt. 10 cts., 1/2 oz. 30 cts., oz. 50 cts.

SENSITIVE PLANT. The Sensitive Plant, or

Mimosa pudica, gets its name from its interesting habit of closing its leaves at the slightest touch. Sow the seed in the house in March and transplant to the open ground late in May. Pkt. 10 cts., 1/2 oz. 30 cts., oz. 50 cts.

STOCKS. The old-fashioned Ten Weeks Stocks are beautiful,

free-flowering, sweet-scented annuals, requiring a mellow soil but otherwise very easy to grow. Sow the seed in April or May and give the plants 12 to 15 inches of space. They may be potted up in the fall and will bloom almost as freely in the house as out-of-doors.

Dwarf German. A vigorous garden strain that grows about 1 foot high and sends up quantities of heavy spikes crowded with blossoms, many double, in a great range of delicate colors. Pkt. 10 cts., 1/2 oz. \$1.25, oz. \$2.25.

SUNFLOWERS. Sow the seed in April or May and

give the plants plenty of room. Fine for massive borders and backgrounds.

Golden Chrysanthemum-flowered. Strong plants, growing 4 to 5 feet high, with many branches bearing big, double flowers like golden chrysanthemums. Pkt. 10 cts., 1/2 oz. 30 cts., oz. 50 cts.

Miniature (*Cucumerifolius*). Single flowers, bright yellow with dark brown centers. Fine for cutting as well as display. Pkt. 10 cts., 1/2 oz. 30 cts., oz. 50 cts.

Red. Large single or semi-double flowers ranging in color from pink to deep purplish red and mahogany. Pkt. 10 cts., 1/2 oz. 40 cts., oz. 75 cts.

Mammoth Russian. The common variety and the largest and most productive, growing to a height of 6 to 8 feet. Oz. 10 cts., 1/4 lb. 15 cts., lb. 40 cts.

SWEET PEAS

Success with Sweet Peas in our climate depends largely on getting an early start in order that the vines may make their growth and commence to bloom before hot weather. Some people always sow their Sweet Peas on St. Patrick's Day; others believe in sowing on Good Friday; but the point is that the seed can and should be sown just as early in the spring as the ground can be put in shape to receive it. Next in importance is the insuring of a plentiful supply of moisture and fertility about the roots; this is

accomplished by digging a trench a foot or more deep and then refilling it to within 6 inches of the top with loose soil mixed with a fair quantity of manure, compost, or other humus material if the soil be poor, and with a scattering of lime or wood-ashes to correct any acid condition. Sow the seeds on top of this layer, spacing them 1 to 2 inches apart, and cover with an inch of soil. As the plants grow, fill in the trench around them until the level of the surface is reached. By this method the roots will be deep enough so that they will not be seriously affected by hot, dry weather. Thin out, if necessary, so as to leave 4 to 6 inches between plants, and support the vines with brush, netting, or strings.

Sweet Peas bloom best in an open, sunny situation. Keeping the flowers picked as fast as they open prolongs the period of bloom. The old-fashioned or Grandiflora type of Sweet Peas are hardy and very floriferous and the flowers are heavily scented, although of only medium size and rather stiff in form. The new Spencer or waved Sweet Peas are much larger and finer in form as well as colors, but not quite so free-blooming. Modern gardeners and florists as a rule grow only the Spencer varieties. **Use Stimugerm on Sweet Peas.** See page 75.

SPENCER SWEET PEAS

Distinguished by giant size, often measuring 2 inches in diameter, and by beautifully waved petals. Hundreds of varieties are known to specialists and new sorts are being constantly produced by English and American breeders, but we believe that the varieties we offer comprise the best and most satisfactory of the new as well as old, in all of the favorite colors.

	Pkt.	Oz.	1/4 lb.	Lb.
All Bright. Scarlet-cerise.....	\$0 15	\$0 60	\$2 00	\$7 00
Asta Ohn. Pinkish lavender.....	10	30	1 00	3 00
Countess Spencer. Rose-pink.....	10	30	1 00	3 00
Crimson King. Rich ox-blood-crimson	10	30	1 00	3 00
Elfrida Pearson. Giant shell-pink...	10	30	1 00	3 00
Etta Dyke. Giant pure white.....	10	30	1 00	3 00
Fiery Cross. Bright orange-scarlet..	10	30	1 00	3 00
King Edward. The best deep red...	10	30	1 00	3 00
Majestic Cream. Rich deep cream..	10	30	1 00	3 00
Margaret Atlee. Rich cream-pink...	10	30	1 00	3 00
Mary Pickford. Cream-pink.....	15	60	2 00	7 00
Miss California. Beautiful orange-salmon and cream-pink.....	15	60	2 00	7 00
Mrs. Tom Jones. Bright delphinium-blue.....	10	30	1 00	3 00
New Miriam Beaver. Light apricot-buff-pink.....	10	30	1 00	3 00
Othello Spencer. Dark chocolate-maroon.....	10	30	1 00	3 00
Pinkie. Large; rose-pink.....	10	30	1 00	3 00
Primrose Spencer. Pale creamy yellow.....	10	30	1 00	3 00
Prince of Orange. Deep orange....	10	30	1 00	3 00
Reflection. Best clear blue.....	15	60	2 00	7 00
Royal Purple. Immense bright purple	10	30	1 00	3 00
Wedgwood. Fine clear blue.....	10	30	1 00	3 00
Winnie Morse. Flushed rose-pink...	15	60	2 00	7 00
Scott's Finest Mixed Spencers....	10	25	75	2 50



Spencer Sweet Peas

SWEET WILLIAM. Hardy, thrifty perennials, great favorites in all gardens; easily grown from seed. The flowers are borne in large trusses and are delightfully fragrant. Sow any time from early spring to July. The plants should stand at least 8 inches apart.

Single Varieties, Mixed Colors. White, Pink, Red, Dark Crimson and other colors, many with distinct "eyes" or margins of a different shade. Pkt. 10 cts., 1/2 oz. 30 cts., oz. 50 cts.

Double Varieties, Mixed Colors. The double flowers are very attractive in form as well as colors. Pkt. 10 cts., 1/2 oz. 50 cts., oz. 90 cts.

GRANDIFLORA SWEET PEAS

These are the old-fashioned Sweet Peas, not so large or delicately formed as the Spencers, but more profuse in bloom.

Eckford's Finest Mixture. The best of the Grandiflora varieties, in all colors. Oz. 10 cts., 1/4 lb. 30 cts., lb. \$1.



Hybrid Verbenas



Mammoth Dahlia-flowered Zinnia

THUNBERGIA. A slender climbing or trailing annual with many little flowers, varying from palest primrose to deep buff-yellow, all with dark centers, from which it derives its common name, "Black-eyed Susan." It is fine for low trellises and for trailing over the edges of porch-boxes and vases. Start indoors in February or March. Thunbergia may also be grown in the greenhouse at any time of year. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts.

VERBENA. Low, spreading plants with handsome dark green foliage and great clusters of sweet-scented flowers all summer long. Old favorites for low beds and edging, also for boxes and vases. Sow indoors in February or March and transplant to the garden in May, spacing the plants 15 inches apart. The seed may also be sown directly in the open ground early in May.

Mammoth Hybrids. These varieties produce extra-large flower-heads with individual florets often measuring an inch across. **Lucifer** (Scarlet); **Italian Striped**, **Auricula-eyed Mixed**, **Red**, **White**, **Blue**, or **Pink**, in separate colors or **Mixed**. Pkt. 10 cts., $\frac{1}{2}$ oz. 60 cts., oz. \$1.

Choice Mixed. Contains many colors including many striped and "eyed," as well as self-colored sorts, but not so large. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts.

VINCA. This tender perennial is better known as Madagascar Periwinkle and will bloom the first year if seed is sown early. It forms handsome, bushy bedding plants that bloom profusely all summer from seed sown indoors in February or March, and is fine for pot culture. 1 to $1\frac{1}{2}$ feet high.

Choice Mixed. An excellent assortment of Red, White with Rose center, Pure White, and Pink. Pkt. 10 cts.

WALLFLOWER. The Wallflowers are perennials but in our rigorous climate they require protection over winter and are best carried over in a coldframe. They grow best in a deep, moist soil. Sow the seed indoors in March or outdoors late in May and space the plants about 8 inches apart. The flowers are clustered on spikes $1\frac{1}{2}$ feet tall, very fragrant.

Single Varieties, Mixed Colors. Artistic shades of coppery red, bright brown, bronzy yellow, etc. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts.

WILD CUCUMBER. A very rapid-growing, vigorous climber, often running 30 to 40 feet in a season. It bears small, white, slightly fragrant flowers, followed by spiny seed-pods. Pkt. 10 cts., $\frac{1}{2}$ oz. 20 cts., oz. 35 cts.

ZINNIAS. The recent improvements in these old-fashioned garden annuals have made them more popular than ever. Few flowers provide a more gorgeous display with less care or attention; all they require is a sunny spot to cause them to grow and bloom vigorously from early summer until frost. The seed may be sown in the garden any time during April or May and the plants thinned or transplanted to stand 8 to 18 inches apart, according to variety. The largest specimen blooms are produced on plants that are grown on a mellow, moderately rich soil and given ample room to develop. If broad, bushy plants are desired, pinch out the top buds when about 15 inches tall.

Mammoth Dahlia-flowered. The newest and largest of the Zinnias, making sturdy plants 3 feet high, with very deep, double flowers made up of numberless small, silky petals. The blooms are so large as to be termed "gigantic" and re-

semble the popular Decorative Dahlias enough to justify their name. **Crimson Monarch** (red), **Dream** (purple), **Exquisite** (pale rose), **Oriole** (orange-gold), **Scarlet Flame** (bright scarlet), pkt. 15 cts., $\frac{1}{2}$ oz. \$1.25, oz. \$2. **Finest Mixed.** All colors. Pkt. 15 cts., $\frac{1}{2}$ oz. 75 cts., oz. \$1.25.

Scott's Double Giants. Next to the new Dahlia-flowered class, these are the tallest and largest of the Zinnias and constitute a great improvement over the old types. The plants grow $2\frac{1}{2}$ feet tall and bear immense, double blooms often 5 inches in diameter. **Pure White**, **Clear Yellow**, **Rose-Pink**, **Bright Scarlet**, **Deep Crimson**, or **Purple**, in separate colors or **Mixed**. Each, pkt. 10 cts., $\frac{1}{2}$ oz. 75 cts., oz. \$1.25.

Scabiosa-flowered. Entirely different from all other Zinnias. The plant reaches the height of about 40 inches and flowers abundantly. The form of the blooms is unique. The outer edge is formed of long ray petals; and the center is a tuft of many small, perfect flowers, which at first sight give it a great resemblance to the Scabiosa. **Mixed Colors.** Pkt. 25 cts.

Elegans, Tall Varieties, Mixed. The type most commonly grown. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

Elegans, Dwarf Varieties, Mixed. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

Scott's Annual Cut-Flower Mixture

Here is a mixture of annuals that we do not hesitate to recommend. Anyone is sure to have success with it, and it provides continuous bloom all summer. This mixture should be in every garden, no matter how large or small. Pkt. 15 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts., $\frac{1}{4}$ lb. \$1.50.



For Your Lawn—Start with Good Seed

The first and most important requirement for a smooth, lasting green lawn is pure, vigorous seed of the most suitable varieties of grass. No one kind of grass will meet all the varying conditions of climate and soil. For best results it is necessary to sow a mixture of different sorts, but to avoid trouble with weeds and have a solid green lawn at all times and under all conditions, such a mixture must be composed of the right kinds of grass in the right proportions.

The Scott Lawn Grass Mixtures are made of the best re-cleaned American and European grass seeds it is possible to procure. They contain no "fillers," such as unhulled Red Top, light-weight Blue Grass, etc., and they are as free from weeds as the most modern and careful methods of harvesting and cleaning can make them. They have been used in making thousands of fine lawns. Better lawn grass mixtures cannot be made.

Fertilizers. After the soil has been well prepared and the seed sown, we recommend that a high-grade fertilizer be used. We have a complete line of fertilizers, and prices and descriptions will be found on pages 70 to 74.

"Lawns, How to Make and Maintain Them." A carefully prepared leaflet, free to those who ask for it.

SCOTT'S "PURITY" LAWN GRASS SEED

This is an extra-fine mixture of re-cleaned Grass Seeds of the varieties that are best adapted to general lawn sowing. In preparing this mixture it was our aim to make a formula that would produce a durable and lasting lawn, withstanding the extreme heat of the summer, the cold and frost of winter, as well as the periods of drought and moisture that mark our Pennsylvania climate. We believe the testimony of our customers will prove that we have succeeded in our efforts, and a lawn that is sown with our Lawn Grass Mixture will show a rich, velvety appearance in five to six weeks after sowing.

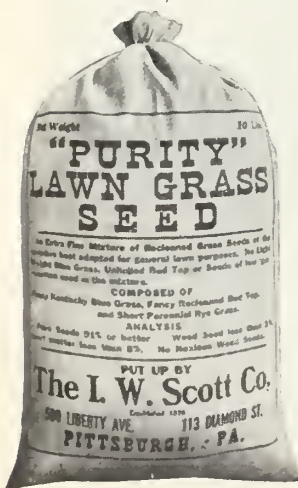
Sow at the rate of about one pound to each 300 square feet. This is a liberal seeding. About 100 pounds will be required to seed an acre of lawn. A measured bushel will weigh about twenty-seven pounds. $\frac{1}{2}$ lb. 25 cts., 1 lb. 45 cts., 2 lbs. 80 cts., 5 lbs. \$1.75, 10 lbs. \$3, 25 lbs. \$7, 100 lbs. \$26.

Bent Grass Mixture. Composed of Agrostis varieties (Colonial Bent and Red Top). Soil should be well prepared. Apply sulphate of ammonia at rate of 1 pound to 250 square feet several times during the growing season mixed with several times its bulk of dry, fine, sifted soil. Sow at the rate of about 1 pound to each 250 square feet or 175 pounds of seed to the acre. $\frac{1}{2}$ lb. 50 cts., 1 lb. 90 cts., 5 lbs. \$4.25, 10 lbs. \$8, 25 lbs. \$18, 100 lbs. \$70.

Shady Lawn Mixture. This mixture is made from Grasses which will thrive under the shade of trees and buildings, where comparatively little sun reaches the ground, and in places where ordinary Grasses will not succeed. The quantity of seed required for sowing is practically the same as for our Lawn Grass Mixture. $\frac{1}{2}$ lb. 30 cts., 1 lb. 55 cts., 2 lbs. \$1, 5 lbs. \$2.25, 10 lbs. \$4, 25 lbs. \$8.50, 100 lbs. \$32.

Putting-Green Mixture. Our Putting-Green Mixture is made from selected stocks of those European and American Grasses which have proved the best for the purpose. As we import large quantities of Grasses, we are well equipped for preparing special Golf-Course Mixtures. $\frac{1}{2}$ lb. 35 cts., 1 lb. 65 cts., 5 lbs. \$3, 10 lbs. \$5.50, 25 lbs. \$12.50, 100 lbs. \$48.

GRASS SEEDS BY PARCEL POST. If wanted by parcel post, add for postage at your parcel post zone rate.





GRASS SEEDS

SOUTH GERMAN BENT (*Agrostis stolonifera*). A superior Grass for putting-greens on account of its dwarf growth and its narrow leaves. It will grow and make good turf in good or bad soils, and dry weather or heavy rains seem to have no serious effects. About forty pounds of seed are required for an acre.

COOS COUNTY BENT (*Agrostis alba maritima*). Used principally on golf-courses for putting-greens. Its texture is fine and uniform, and under good cultural conditions, on soils of reasonable fertility, it will form a sod very quickly. It makes a very good growth in rather dense shade, and spreads with great rapidity, largely by surface-creeping stolons that root at the nodes. A fine-leaved, bright green Grass that continues growth and maintains its color especially well during hot weather as well as under low temperatures.

COLONIAL BENT (*Agrostis capillaris*). A tight, thick turf, permanent under close mowing. Good for putting-greens and fairway mixtures.

ASTORIA BENT (*Agrostis capillaris; Astoriana*). An underground creeper, making a deep, heavy sod of fine texture and color.

RED-TOP (*Agrostis alba*). A valuable Grass for hay, pasture or lawn. It will grow on any soil that is not extremely dry. With the possible exception of Kentucky Blue Grass, it surpasses all other Grasses for lawn-making, and is an extra-good variety for golf-grounds and other places where the turf must withstand hard usage. About fifteen to twenty pounds of seed will be required for an acre. We handle nothing but the solid re-cleaned seed, having discarded the unhulled and chaff grades.

KENTUCKY BLUE GRASS (*Poa pratensis*). Kentucky Blue Grass is most valuable for pastures and lawn planting. For lawns it is indispensable and, when well established, the lawn will last for years, as the Grass makes an extra-close fine-textured turf. The seed should be mixed with other Grasses that mature earlier, for Blue Grass is very slow in both germinating and maturing.

WOOD MEADOW GRASS (*Poa nemoralis*). Will grow in shady places where practically no other Grass will succeed, and therefore is particularly desirable for shaded lawns. It is also desirable for mixing with golf-link Grasses, as it makes a compact turf. About thirty-five pounds of seed for an acre.

ROUGH-STALKED MEADOW GRASS (*Poa trivialis*). A thick-matting, stoloniferous species which makes a heavy turf well-adapted to shady situations. Light moisture, but does not do well in dry, exposed places.

DOMESTIC RYE GRASS. This is a mixture of Italian and English Rye Grasses much used as a temporary turf for winter in the southern states. Quick-growing, and makes a handsome, bright green sod.

ITALIAN RYE GRASS (*Lolium italicum*). Makes a dense turf when sown thickly or mixed with other Grasses. It is most useful on medium moist soils and grows very rapidly into a bright green sod.

PACEY'S PERENNIAL RYE GRASS (*Lolium perenne, Pacey*). A fine-leaved Grass, smaller than the ordinary variety and more resistant to cold. An excellent green on fairways or anywhere that a quick-growing sod is needed.

CHEWING'S NEW ZEALAND FESCUE (*Festuca rubra fallax*). A fine, needle-like sod excellent for putting-greens and lawns.

RED FESCUE (*Festuca rubra*). A close, long-lasting turf for dry, sandy soils. Excellent at the sea-shore.

SHEEP'S FESCUE (*Festuca ovina*). Bluish "bunch Grass," useful for mixtures, for dry lands and pastures.

HARD FESCUE (*Festuca durinacula*). A wiry bluish gray Grass for dry lands. Extremely hardy.

CRESTED DOG'S-TAIL (*Cynosurus cristatus*). A low-growing Grass that makes extra-dense turf in rich, moist soils; is also desirable for putting-greens and lawns. Will grow equally well in the shade or the sun. About seventy pounds of seed will be required for an acre.

ORCHARD GRASS (*Dactylis glomerata*). A quick-maturing Grass that is used for pasture and hay. It may be cut several times during the year, but it is advisable to use the machine before the plants show the seed-heads. From thirty to thirty-five pounds will be required for an acre.

SWEET VERNAL GRASS (*Anthoxanthum odoratum puelii*). A quick-growing, fragrant Grass of little value for lawns.

TIMOTHY (*Phleum pratense*). One of the most important hay Grasses, sometimes used to nurse lawns made on rough soil. The most valuable hay plant.

WHITE DUTCH CLOVER (*Trifolium repens*). Valuable for quick lawns and permanent pastures.

PERMANENT PASTURE

On account of the great variation of soils and conditions, a fixed formula for a permanent pasture is not feasible in all cases. We, however, recommend the following as the mixture that will produce the best all-round results. Seed required for one acre:

12 lbs. Kentucky Blue Grass	6 lbs. Medium Red Clover
3 lbs. Re-cleaned Red Top	3 lbs. Alsike Clover
6 lbs. Timothy	1 lb. White Clover

Where there are steep, shaley, or thin soil knobs or ridges, about 8 pounds of Orchard Grass should be added to the above.

Pasture Mixtures have been, in the past, a very convenient method of getting rid of low-grade seeds, and we prefer to sell the straight seeds and let the purchaser do the mixing. He knows then just what he is getting and what the mixture contains.

SUMMER-FLOWERING BULBS

HARDY LILIES

Showy garden flowers of the utmost beauty and stateliness, which are enormously popular just now. Plant them 6 to 8 inches deep and as early as possible in well-drained unfertilized soil, and let them alone.

Auratum (Gold-banded Lily). White flowers of enormous size with crimson spots and golden stripes produced in August. 25 cts. each, \$2.50 per doz.

Henryi. The flower-stalk, 3 to 5 feet high, carries numerous flowers, each a rich apricot-yellow spotted with brown. 35 cts. each, \$3.50 per doz.

Regale (The Royal Lily). Enormous, trumpet-shaped flowers, with waxen white petals suffused with gold inside and stained with purple outside; fragrant. It is very hardy and does well in almost any situation, growing 2 to 4 feet high and bearing its blooms in a whorl at the top. 35 cts. each, \$3.50 per doz.

Speciosum album. Pure white. 25 cts. each, \$2.50 per doz.

Speciosum rubrum. White, shaded with deep rose and spotted red. 35 cts. each, \$3.50 per doz.

Tigrinum splendens (Tiger Lily). A larger and more prolific flowering form of the old-fashioned Tiger Lily. It grows 4 to 6 feet tall, bearing an immense cluster of showy orange-red and brown flowers, which last for weeks. Very easy to grow, and increases year by year in beauty and size. 25 cts. each, \$2.50 per doz.

BEGONIAS, TUBEROUS-ROOTED

These plants grow from hard, crooked bulbs, like flat potatoes, hollowed on one side. In planting, be sure that the hollow side is up. They make strong, fleshy stems a foot or more high, with big, bristly, very beautiful leaves, crowned by flowers of enormous size and almost unbelievable brilliance. Blooms $4\frac{1}{2}$ to 5 inches across are not unusual. They should be started in pots or pans indoors in February or March, and transplanted to the garden about the time that corn is growing well. They may also be started outdoors at the same time but will bloom later. Separate colors: **Single varieties, white, scarlet, pink, or yellow flowers; Double varieties, red, salmon, rose, or orange flowers.** All varieties, 25 cts. each, \$2.50 per doz., \$16 per 100.



Lillium auratum



Lillium regale

GLOXINIA

Beautiful velvety flowers of trumpet shape produced by tender, tropical bulbs which may be grown in pots or greenhouse benches. The large foliage is covered with plush-like hairs, and should not be wet. Keep them warm at all times. The flowers are violet, rose, crimson, white, or beautifully mottled.

Mixed colors. 30 cts. each, \$3 per doz., \$20 per 100.

Caladium esculentum (Elephant's Ear)

For imposing masses of tropical foliage there is nothing so effective or so easily grown as the Elephant's Ear. The plants grow from 3 to 5 feet high, with enormous bright green leaves, veined with lighter green, broad and thick and bearing a decided resemblance to elephant's ears, whence the popular name. They thrive best in a moist, rich soil but can be grown in almost any situation. Plant the bulbs late in May, after all danger from frost is past, spacing them 2 to 4 feet apart and covering them a few inches deep. The larger the bulb, the larger the plant and the more space required. If extra-large plants are desired, start the bulbs indoors in pots or large boxes, in March or early April, and transplant to the open about June 1. Give plenty of water throughout the season; liquid manure is very beneficial. The bulbs may be carried over winter by digging them up after frost has killed the leaves, drying them in the sun, and then storing in boxes with sand or dry soil in a frost-proof cellar.

	Each	Doz.	100
5 to 7 inches circumference.....	\$0 05	\$0 50	\$3 50
7 to 9 inches circumference.....	10	1 00	7 00
9 to 11 inches circumference.....	15	1 50	10 00
11 to 13 inches circumference.....	25	2 75	20 00
13 to 15 inches circumference.....	40	4 00	30 00

TUBEROSE

Old-fashioned flowers valued for their fragrance. Start the bulbs indoors in March and transplant to the open in early May.

WHITE PEARL. The best variety. Flowers creamy white, large, and double.

First-Size Bulbs. 5 cts. each, 50 cts. per doz., \$3.25 per 100.

Mammoth Bulbs. 10 cts. each, \$1 per doz., \$7 per 100.

All Bulbs sent postpaid at above prices

CANNAS

The modern Cannas with their splendid foliage and large, gorgeously colored flowers surpass all other plants for massive beds and heavy borders. They are very easy to grow, thriving best in a sunny, well-drained spot. For extra-large plants and heavy foliage effects, the soil should be well manured. Dig the bed deep and plant the roots after the middle of May, setting them about 4 inches below the surface and 1½ to 2 feet apart, depending on variety, the tall sorts requiring more space than the dwarf. The plants will bloom continuously from July until frost. If the roots are started in March in pots or boxes of sandy soil placed in a sunny window and given plenty of water, the plants will be several inches high when it is time to set them outdoors, and they will come into bloom a month to six weeks sooner.

Alphonse Bouvier. A popular bedding variety, with green leaves and bright crimson flowers. Height 4½ feet. 6 cts. each, 60 cts. per doz., \$4 per 100.

Ambassador. Brilliant rich cherry-red flowers of immense size. Growth very vigorous and massive. Foliage and stalks bronze. Height 4 feet. 8 cts. each, 90 cts. per doz., \$6 per 100.

City of Portland. Clear glowing rosy pink flowers of unusually large size; broad, rich green leaves. Wonderfully effective and the best Canna of its color. Height 3½ feet. 8 cts. each, 90 cts. per doz., \$6 per 100.

Crimson Bedder. Foliage dark green; flowers deep blood-red. Height 3 feet. 6 cts. each, 60 cts. per doz., \$4 per 100.

Eureka. The best white-flowering Canna for bedding. Height 4½ feet. 8 cts. each, 90 cts. per doz., \$6 per 100.

Fiery Cross. A famous variety, with big, substantial carmine-red flowers and beautiful bluish green foliage. A constant bloomer. Height 4 feet. 8 cts. each, 90 cts. per doz., \$6 per 100.

Florence Vaughan. A favorite bedding Canna. Flowers yellow with red spots; leaves light green. Height 4½ feet. 6 cts. each, 60 cts. per doz., \$4 per 100.

Gladiator. Bright golden yellow flowers, freely dotted with crimson; foliage broad and bright green; a most effective bedder. Height 4½ feet. 6 cts. each, 60 cts. per doz., \$4 per 100.



Bed of Cannas with border of Centaurea, Gymnocarpa and Salvia

Golden Gate. The brightest of the yellow sorts, opening pure golden yellow but becoming suffused and striped in the center with crimson and apricot as the flower develops. Leaves bright green. Height 4 feet. 6 cts. each, 60 cts. per doz., \$4 per 100.

King Humbert. Undoubtedly the most popular Canna in cultivation and, on account of its rich purplish bronze foliage, one of the most handsome and conspicuous. Flowers orange-scarlet, freely produced for a long season. Height 4½ feet. 8 cts. each, 90 cts. per doz., \$6 per 100.

Meteor. One of the finest tall-growing Cannas. The broad-petaled flowers are dazzling crimson and are carried in big clusters. Foliage deep green. Vigorous and blooms for a long season. Height 5 feet. 8 cts. each, 90 cts. per doz., \$6 per 100.

Mrs. Alfred Conard. Rich salmon-pink flowers of great size and substance, come in enormous clusters. The finest bedding Canna of its color. 8 cts. each, 90 cts. per doz., \$6 per 100.

Shenandoah. Flowers salmon-pink, borne in large clusters; foliage rich ruby-red. Height 4 feet. 6 cts. each, 60 cts. per doz., \$4 per 100.

Statue of Liberty. Flowers blazing flame-red. The foliage is of a rich, luxuriant bronzy shade. The leaves are larger than any Canna we know. Height 6 to 7 feet. 8 cts. each, 90 cts. per doz., \$6 per 100.

The President. The finest red Canna in existence and considered by many growers to be the most valuable Canna of any color ever introduced. Enormous glowing scarlet flowers of wonderful substance borne erect on strong stems; luxuriant deep green foliage. Blooms continuously from midsummer until frost. Height 4 feet. 8 cts. each, 90 cts. per doz., \$6 per 100.

Queen Charlotte. Rich pomegranate-red flowers bordered with golden yellow. Height 3½ feet. 6 cts. each, 60 cts. per doz., \$4 per 100.

Wintzer's Colossal. Remarkable for its exceptionally large, broad-petaled flowers, often measuring 8 inches across. Deep scarlet with light green foliage. Height 5 feet. 8 cts. each, 90 cts. per doz., \$6 per 100.

Yellow King Humbert. A large-flowered yellow variety, popular for tall beds. Flowers deep yellow, blotched with red; leaves dark green. Height 5 feet. 8 cts. each, 90 cts. per doz., \$6 per 100.

MISCELLANEOUS BULBS

ANEMONE (Windflower)

Suitable for pot or border culture and for massing. Soak bulbs 24 hours before planting.

De Caen. A very large-flowered, single strain of unique beauty. All colors.

St. Brigid. Very large, vivid flowers of scarlet, pink, purple, etc.

Hollandia. Rich crimson with glittering black centers. Blooms long.

All Anemones, 10 cts. each, \$1 per doz., \$7 per 100

ISMENE CALATHINA (Peruvian Daffodil)

Enormous, richly fragrant white flowers of the amaryllis type, curiously cupped and most attractive. Grow in warm, sunny soil and treat like gladiolus, except that they cannot be set out until corn is growing outdoors, and the bulbs should be kept warm in winter. 25 cts. each, \$2.50 per doz., \$20 per 100.

RANUNCULUS

Finest Mixed. Fine, brilliantly colored, double flowers on stems over a foot long for cutting. Double and semi-double, and produced in great abundance. 10 cts. each, \$1 per doz., \$7 per 100.

SUMMER-BLOOMING OXALIS

Charming low, bushy plants for growing in pots or borders, with clover-like leaves and round, cheerful flowers of various shades of pink and crimson which close at night. Continue in bloom for many weeks. 5 cts. each, 50 cts. per doz., \$3.50 per 100.

HYACINTHUS CANDICANS (Summer Hyacinth)

Tall spikes with scores of drooping, bell-shaped white flowers in midsummer. Very attractive and unusual. Handle like gladiolus. 15 cts. each, \$1.50 per doz., \$10 per 100.

All Bulbs sent postpaid at above prices

GLADIOLUS

There are few flowers to compare with the Gladiolus for all-round usefulness in the home-garden—and few flowers are more lovely or easier to grow. Their graceful form, attractive colors, and characteristic markings have given them the popular name of "Garden Orchids." Any ordinary garden soil will grow fine Gladiolus, provided they receive plenty of sunlight. Plant the bulbs any time after mid-April up to the end of June, setting them about 4 inches deep and 6 inches apart. The fine improved sorts we offer make ideal cut-flowers. If cut when the first one or two flowers have opened and kept supplied with fresh water, the remaining flowers will open and the spikes will last for over a week. For a constant supply of flowers for cutting from August to frost, make plantings every week or ten days during the spring. The bulbs may be dug in the fall before the ground freezes and stored over winter in dry, cool, but frost-proof places.

SHOW OR EXHIBITION VARIETIES

For this page we have chosen the cream of the new, gorgeously colored, giant-flowering varieties, and a representative group of older sorts of proved quality which have claimed honors and awards at exhibitions throughout the country. It requires no more effort to grow these modern top-notch varieties than the older, less spectacular sorts, and the rewards in anticipation and eventual realization of Gladiolus delight far outweigh any consideration of first cost. Every grower of Gladiolus will want to avail himself of this opportunity to keep up to date with his favorite flower—and will be more than gratified at the magnificent beauty of these most recently introduced, highly improved varieties. These are prize-winners for garden and flower shows—every one of them.

Charles Dickens. Purple-violet. A very good grower and choice variety. 15 cts. each, \$1.50 per doz., \$10 per 100.

Dr. F. E. Bennett. Peach-red, overlaid with flame-scarlet; throat speckled ruby and creamy white. Very large flowers of great substance, many open at a time on strong stems. Sturdy grower. 15 cts. each, \$1.50 per doz., \$9 per 100.

Geraldine Farrar. Beautiful pale lavender-blue, with deep violet spot on lower petals. A beautiful variety, though not quite as good as Mrs. Van Konynenburg, which is a little darker in color. 15 cts. each, \$1.50 per doz., \$10 per 100.

Gloriana. Finest golden salmon, with pure yellow throat. Large, well-opened flowers, many open at a time on always straight, strong, and tall stem. 15 cts. each, \$1.50 per doz., \$10 per 100.

Golden Dream. Pure golden yellow. The spike and size of flower is like Golden Measure, though its color is better and clearer yellow. This variety will become one of the leading yellow cut-flowers. 15 cts. each, \$1.50 per doz., \$10 per 100.

Herbstzauber. This variety has a beautiful warm salmon-copper color. Very large flowers of exquisite form. Tall; late flowering. 15 cts. each, \$1.50 per doz., \$10 per 100.

Illuminator. Brilliant carmine-red with a very faint suffusion of blue. Many large, wide-open flowers on tall, stately spikes. Will resist the hottest sun; extra-fine for cutting. 15 cts. each, \$1.50 per doz., \$10 per 100.

Longfellow. Clear La-France-pink. Tall, slender, wiry spike of large, wide-open flowers. Does not wilt or burn in the hottest weather. 15 cts. each, \$1.50 per doz., \$10 per 100.

Marietta. Delicate shade of light salmon, beautifully blended with light orange; deeper blotch of salmon-red on lower petals, making a very rich color combination. Large flowers on tall, stately spikes. 15 cts. each, \$1.50 per doz., \$10 per 100.

Marmora. Lavender to lavender-gray, with petunia-colored blotch. Ten to twelve very large flowers open at once, well arranged on tall, strong stem. One of the best Gladiolus that has ever been introduced. 45 cts. each, \$4.50 per doz., \$30 per 100.

Minuet. Beautiful clear, light lavender. Four to six large, heavily textured blooms open at once on a good, strong stem. This is the lavender by which all other lavenders are judged. Considered by most growers as the last word in a light lavender Gladiolus. 20 cts. each, \$2.25 per doz., \$15 per 100.

Mr. W. H. Phipps. La-France-pink, overlaid with salmon-rose, lighter toward the center; lower petals faintly striped and speckled with ruby. Enormous flowers, as many as twenty open at a time, and perfectly placed on gigantic stem. A real Super Glad. 15 cts. each, \$1.50 per doz., \$9 per 100.

Mrs. Van Konynenburg. Matchless aniline-blue—far better color than any other blue variety. Grows 5 feet tall, with erect stems and flowers well placed on stem. Even the very last top flower opens up in its true color. Without a doubt the best blue variety. 20 cts. each, \$2.25 per doz., \$15 per 100.

Pfitzer's Triumph. A Super Gladiolus, one of the best ever introduced. Color resembles the variety Dr. Bennett, but the flowers are still larger and of twice the substance; also better shape and nicer form, measuring 6 to 7 inches in diameter. Color bright orange-salmon, with small velvety red mark in throat. It is absolutely irresistible. Imagine a 5-foot spike, the last flower of which, either in water or out in the field, opens up in perfect shape, retains its full color, and is still as big as an America, and you have Pfitzer's Triumph. 25 cts. each, \$2.50 per doz., \$18 per 100.

Scarlet Wonder. Purest deep scarlet. Mammoth flowers, many open at a time on tall, stiff stems. A real giant. 15 cts. each, \$1.50 per doz., \$10 per 100.

Veilchenblau. Deep violet-blue. Much larger flowers than Baron Hulot. However, not a very good propagator. 35 cts. each, \$3.50 per doz., \$25 per 100.



Gladiolus

Prices given are postpaid. 50 bulbs of any variety at the 100 rate

STANDARD GLADIOLUS AT POPULAR PRICES

Those who grow Gladiolus for cut-flowers will be interested in this list of tried and true older varieties which are offered here at popular prices. The lower prices do not indicate any lowering of quality in either variety or stock, but simply that, being older, there are more bulbs of the variety in the world, and the demand for them consequently less. Here are some of the finest varieties ever grown at prices well within the reach of everybody. We urge our customers to plant them liberally for garden display or in large blocks for cut-flowers.

5 cts. each, 50 cts. per doz., \$3.50 per 100

Alice Tiplady. Bright saffron-orange; large, open flowers on strong, stiff stems. Excellent cut-flower and forcer.

Crimson Glow. Glowing, velvety crimson, shaded deeper in the center. Tall, strong grower, with flowers well placed. Considered the best in its color.

Evelyn Kirtland. Very warm rose-pink, deeper at the edges of the petals, shading towards shell-pink in the center; brilliant scarlet blotches on the lower petals. Strong stem, making it one of the most desirable varieties for cutting.

Halley. Salmon-pink with creamy yellow blotch on lower petals. Very early, and great favorite as a commercial cut-flower.

Jewell. (Prim.) Light salmon-pink, with beautiful golden yellow throat. Flowers large and wide open, on long, slender stems. A most attractive early variety.

Los Angeles. Beautiful shrimp-pink, with glowing orange-carmine blotch in throat. Tall and graceful stems. One of the best forcing varieties for florists, most bulbs blooming with two spikes.

The following at 7 cts. each, 75 cts. per doz., \$5 per 100, except as noted

Baron Hulot. Deep indigo-blue; not large, but there is nothing better in that color. 10 cts. each, \$1 per doz., \$7.50 per 100.

Byron L. Smith. Delicate lavender, deepest at the edges of the petals and shading toward white in the center, giving the impression of an orchid. Well arranged on good stem.

Captain Boynton. Beautiful lavender, with deeper blotch on lower petals. Large flowers, perfectly placed on tall, strong stems. An excellent variety and early forcer.

Elf. Lemon-yellow when in bud, opening up pure white with pale yellow lower petal. Large flowers and perfectly built spike. Very good propagator and good cut-flower.

Giant Nymph. Light rose-pink, with creamy yellow throat. Very large, wide-open flowers, well arranged on long stems. Grows 6 feet tall.

Golden Measure. Pure golden yellow. Very large flowers of good substance. Robust grower and considered the best yellow on the market. A *superblad*.

Jack London. Flowers light salmon with vermilion stripes and canary-yellow throat, on strong stems. A robust grower.

Louise. Orchid-lavender, with deeper blotch in throat—a refined color combination. Wide-open flowers on strong stem.

Mrs. Dr. Norton. Silvery white base, tinged with pink, deepening toward the edges of the petals; creamy blotches in throat on lower petals. Tall, vigorous grower. Splendid cut-flower.

Mrs. H. E. Bothin. Geranium-pink, tinted salmon; flaming scarlet center—a very striking color combination. Well placed, heavily ruffled flowers on strong stem. A leader.

Mrs. Leon Douglas. Begonia-rose, striped with flame-scarlet; lower petal pale lemon, speckled ruby. Tremendously large flowers, many open at a time, on very tall, strong stem with several side shoots, the whole forming a gigantic bouquet. Considered one of the largest Glads in existence.

Nancy Hanks. Rich apricot to orange-pink, with grenadine tongue. Six or more flowers open at once, well arranged on strong stem and of good substance. Will not burn in the hottest sun. 10 cts. each, \$1 per doz., \$7.50 per 100.

Orange Queen. (Prim.) Purest apricot of a very warm tint. Large, open flowers on good stems. Justly considered one of the very choicest Grandiflora Primulinus. 10 cts. each, \$1 per doz., \$7.50 per 100.

Pride of Hillegom. Deep rich scarlet with lighter throat; cream lines on center of lower petals. Tall, graceful stems with many flowers open at a time.

Purple Glory. Deepest velvety maroon with almost black blotches. Large, ruffled flowers on very tall, sturdy stems. A real giant in all respects.

Mary Pickford. Lovely creamy white with soft sulphur-yellow throat; stem also creamy instead of green, giving the whole a delicate, unique appearance.

Mrs. Francis King. Flame-red, shaded salmon toward throat. Very tall, strong spike. An old favorite florist variety.

Mrs. Frank Pendleton. Deep rose-pink, shading to pale pink in throat; large, bright crimson blotches on lower petals, giving it a striking appearance. Tall, vigorous grower. Extra-fine cut-flower and forcer.

1910 Rose. Pure deep rose-pink, with white center lines on lower petals. Strong, vigorous grower and very early. Good cut-flower.

Peace. Pure white, with lilac feathering on lower petals. Large flowers on long, strong stem, many open at a time. Great variety for late blooming.

Souvenir. (Prim.) Purest golden yellow of all Gladiolus. Large, beautifully shaped flowers on tall, slender stems.

Virginia. Large, massive, flaming scarlet flowers, many open at a time, making a gorgeous display of dazzling red. Good forcer.

Rose Ash. Old-rose, overlaid and blended with pink, blue, and red, giving the color of ashes of roses, hence its name. Large flowers on tall, strong spikes. Very attractive.

Sheila. Light salmon. Large flowers on tall, erect stems. Very early.

Tyrian Beauty. Pure Tyrian-rose, upper petals a shade lighter. Large flowers, well placed on tall, straight stem. Robust grower. Very attractive. 10 cts. each, \$1 per doz., \$7.50 per 100

SCOTT'S FINEST MIXED. This mixture is made up of many named Gladiolus, including the finest sorts in our list as well as other desirable varieties. Large, healthy bulbs, sure to bloom. 4 cts. each, 45 cts. per doz., \$3 per 100.



Gladiolus Group

Prices given are postpaid, 50 bulbs of any variety at the 100 rate. Larger quantities quoted on request

DAHLIAS

It is doubtful if there are any flowers that afford as much general satisfaction as Dahlias. The ease with which they can be grown in any sunny situation, their freedom from pests and blights, their endless variety of color, size, and form, and their great usefulness for cutting as well as garden decoration insure them a permanent place in popular favor, while their low cost makes it easy for everyone to start a collection which can be added to year after year. The roots or tubers should be planted about 4 inches deep in well-dug soil during May or June. Allow at least 2 feet of space between plants. Trim out all but the strongest two or three shoots and when these are about 4 feet high pinch off the tips to encourage branching. If extra-large exhibition blooms are wanted, remove all but one or two of the top buds on each stem. Tall plants should be tied to stakes for support. Dig roots when frost has killed the foliage in the fall, and store in sand or soil in a cool but frost-proof cellar.

CACTUS DAHLIAS

These are considered by many to be the most attractive of the Dahlias. They are distinguished by narrow, quilled petals which are often curved and twisted in various forms.

Countess of Lonsdale. A favorite old variety of the true Cactus type, with tightly quilled rays of soft salmon-pink. 30 cts. each, \$3 per doz.

Garden Glow. Orange-red and chrome-yellow. 75 cts. each, \$7.50 per doz.

Hollywood. A large, finely formed flower of beautiful rich salmon. Free bloomer. 30 cts. each, \$3 per doz.

Lawine. White, showing blush as flowers mature. 30 cts. each, \$3 per doz.

Marguerite Bouchon. Magnificent shade of brilliant, yet soft, pink, with very large white center and distinctly fine white tips. 30 cts. each, \$3 per doz.

Mars. A very artistically formed Dahlia with long, wavy petals that give it great refinement and grace. The color is an indescribable combination of salmon-red and rich golden ecru. 50 cts. each, \$5 per doz.

Standard Bearer. Rich, fiery red. 30 cts. each, \$3 per doz.

Susan Peck McAneeny. A beautiful primrose-yellow variety. 75 cts. each, \$7.50 per doz.



Cactus Dahlias



Decorative Dahlia

DECORATIVE DAHLIAS

These include the old-fashioned formal and rather stiff show or "ball" Dahlias, and the newer broad-petaled types of enormous size.

Baltimore. Lemon-yellow. 30 cts. each, \$3 per doz.

Barbara Redfern. Old-rose and gold. 50 cts. each, \$5 per doz.

Edward M. Parrish. Attractive shade—lavender-mauve. 30 cts. each, \$3 per doz.

George Jr. Autumn shades. 30 cts. each, \$3 per doz.

Golden West. One of the best yellows. Good stems. Fine for cutting. 30 cts. each, \$3 per doz.

Jack's Discovery. White, mottled violet-rose. 30 cts. each, \$3 per doz.

JANE COWL. A warm buff and old-gold. \$1.50 each, \$15 per doz.

Jean Kerr. Pure white. 30 cts. each, \$3 per doz.

Jersey's Beauty. Perfect flowers of an ideal shade of pink, with long, handsome stems making it splendid for cut-flower use. A free, early bloomer with exceptional keeping qualities. \$1 each, \$10 per doz.

Judge Duncan. Crimson-maroon. 50 cts. each, \$5 per doz.

Mrs. I. de Ver Warner. A universal favorite. Clear, bright lilac-rose flowers on 5-foot stems. It is a strong grower and 10-inch blooms can be produced by disbudding. 50 cts. each, \$5 per doz.

Patrick O'Mara. Flowers 8 inches or more in diameter, and borne on long, stiff stems. They are firmly set at right angles, close to stem. The color is an unusually soft and pleasing shade of orange-buff, slightly tinged with Neyron rose. \$1 each, \$10 per doz.

Sanhican Blue Bird. An uncommon color blending—bright violet-blue outer petals at maturity, while center retains violet tint. A very large bloom borne erect on a strong wiry stem. \$1 each, \$10 per doz.

Scarlet Lady. A very pretty dark scarlet on good stem. Free, early, and constant bloomer. 30 cts. each, \$3 per doz.

Prices given are postpaid



Clematis Jackmani



Boston Ivy



Scarlet Trumpet Vine

VINES

Well-placed vines make a wonderful addition to the looks of the home or garden. By softening the sharp corners of the buildings and porches, they add a charm not otherwise obtainable. Vine-draped trees and pergolas have a peculiarly appealing grace not easily described, and some of the vines are particularly valuable in covering banks. The following are highly desirable vines. They are all strong, 2-year-old No. 1, field-grown plants, with good root systems.

BITTERSWEET. A bold vine with large foliage hung in autumn with clusters of orange and yellow berries which are very decorative all winter. 60 cts. each, \$6 per doz.

BOSTON IVY (*Ampelopsis Veitchi*). High-climbing, clinging, deciduous vine with lustrous, three-pointed leaves 2 to 4 inches across. Autumnal coloring crimson-scarlet. The best climbing vine for covering houses, walls, etc., in this vicinity. 50 cts. each, \$5 per doz.

CINNAMON VINE. A long-lived, vigorous climber with broad heart-shaped leaves and clusters of white, cinnamon-scented flowers. Dies down to the ground each winter but comes up again very quickly in the spring. 10 cts. each, \$1 per doz., \$7 per 100. If wanted by mail, add 8 cts. per doz. extra.

CLEMATIS Jackmani. Large, flat, 5 to 6-inch, velvety purple flowers, usually in threes, freely produced and highly prized because of their beauty and splendor. Train them over porches or on fences. \$1 each, \$10 per doz.

paniculata. Sweet Autumn Clematis. In August or September the plants are densely covered with fragrant white flowers, followed by seeds, each of which has a grayish, fuzzy plume which gives the plant the appearance of being in bloom until winter comes. Produces dense shade all summer; train them over porches or summer-houses. 35 cts. each, \$3.50 per doz.

Mme. Edouard Andre. Large flowers of bright carmine-violet. Unusual and distinct. \$1 each, \$10 per doz.

DUTCHMAN'S PIPE (*Aristolochia sopho*). A fast-growing vine for covering porches, pergolas, etc. The 6 to 15-inch broadly reniform leaves cast a dense shade. Peculiar pipe-like flowers. 2 to 3-ft. plants, 90 cts. each, \$9 per doz.

HONEYSUCKLE (Lonicera), Halliana. Dark green foliage, with attractive, sweetly scented flowers, produced from July to frost. Desirable for trailing over fences, arbors, and as a ground-cover for banks; weeds will not grow through it. 35 cts. each, \$3.50 per doz.

SCARLET TRUMPET VINE. Vigorous climber, producing in midsummer handsome, trumpet-shaped flowers of reddish orange. 35 cts. each, \$3.50 per doz.

MADEIRA VINE. A rapid-growing climber which will quickly cover porch trellises, arbors, stumps, etc. Foliage light green; flowers white, small and feathery; sometimes called "Climbing Mignonette"; delightfully fragrant. Plant the roots in May. Give light protection during winter.

Large Roots. 10 cts. each, \$1 per doz., \$7 per 100. If wanted by mail, add 8 cts. per doz. extra.

SILVER LACE VINE. Rapid climber with light green, waxen foliage and curious, stringy clusters of crystal-white flowers of irregular shape and extreme beauty. 90 cts. each, \$9 per doz.

WISTERIA sinensis. Handsome, showy, pea-like flowers in large grape-like clusters. Well adapted for training on porches, arbors, trellises, or trees. They require a deep rich soil but the great profusion of bloom well repays one for the trouble of supplying it. Strong, 2-year, grafted plants; sure to bloom.

Purple. Long, pendulous clusters of pale blue flowers. \$1 each, \$10 per doz.

White. Like the above, except pure white flowers. \$1 each, \$10 per doz.

HEDGE PLANTS

Hedges or living fences make the most artistic boundaries for the farm, to mark the line between highway and farm, to define the driveways or enclose the home-grounds. They add much to the value of the place. Once planted they require little attention. These are strong, thrifty, attractively shaped plants that will make desirable specimens on your lawn.

BOXWOOD (Buxus), arborescens. Excellent for specimen shrubs or dignified hedging. Evergreen and hardy. Plants, 12 to 15 in. high, extra heavy. \$2 each.

CALIFORNIA PRIVET (*Ligustrum ovalifolium*). The most popular hedge plant. A rapid grower with dark green foliage that persists until early winter. May be pruned to any shape. Unpruned, it assumes an upright, spreading habit, about 10 feet tall. 12 to 18-in. plants, \$1 for 25, \$3.25 per 100, \$15.50 for 500; 1½ to 2-ft. plants, \$1.50 for 25, \$5 per 100.

JAPANESE BARBERRY (*Berberis Thunbergi*). Compact-growing, much-branched low shrub whose many spines deter animals from breaking through. Its red berries persist until spring. 12 to 18-in. plants, \$1.50 for 10, \$6.50 for 50, \$12 per 100.

RED-LEAVED BARBERRY (*Berberis Thunbergi atropurpurea*). Exactly like the well-known Japanese Barbary except that the foliage is rich crimson, becoming brilliant scarlet when the sun falls on it. A most spectacular plant which is creating a tremendous furore. 12 to 15-in. plants, 50c. each, \$5 per doz.

ROSES

All the Roses listed in this Catalogue are 2-year-old, No. 1, hardy northern field-grown plants, and, with the exception of the climbers, they are budded stock. They are the best the nursery grows, and are stronger, will make a more thrifty growth, and give more blooms than the smaller No. 2 stock usually sold at lower prices.



HYBRID TEA ROSES

Hybrid Tea Roses are extremely popular, perhaps the most popular Roses grown today. A cross between the Hybrid Perpetuals—which are not perpetual bloomers—and the Teas, which as a class are doubtfully hardy here in the North, they combine the hardiness of the former with the abundance of bloom of the latter—an ideal combination. The Hybrid Teas bloom abundantly for a month or more, beginning early in June; then as new growth is made they produce more blooms, particularly from September until hard frost. There is hardly a day, even in midsummer, when blooms may not be picked from a bed of Hybrid Tea Roses.

That the Hybrid Tea Roses may thrive, they need a rich, well-drained soil and sunny situation. Planting should be done in the early spring, just as soon as the ground can be worked. The best growth is made during the cool spring weather. For spring planting we suggest placing your order immediately so we can make an early delivery.

Insects and diseases are easily controlled. Frequent dusting with nicotine extract and sulphur will control black-spot, mildew, and the sucking insects; should chewing insects appear, arsenate of lead may be added to the dust at the rate of one part to nine parts of sulphur.

Set the plants 2 inches or more deeper than they were in the nursery, so as to get the bud below ground. Protect them over winter by mounding earth up about the stems.

Price, 65 cts. each, \$6.50 per doz.

Briarcliff. A deep rose-pink sport of Columbia with all its good qualities, but a bud a third longer with outside petals coming up to a point. Very vigorous grower and a profuse bloomer.

Dame Edith Helen. One of the most remarkable Roses in the world for its giant size, multiplicity of well-placed petals, and its sparkling, pure pink color. Extremely handsome and in great demand.

Duchess of Wellington. A dependable yellow Rose with spicy fragrance. Flowers large, of intense saffron-yellow, changing to deep coppery yellow as they develop; a lasting cut-flower. Ninth in the twelve "Favored Roses of all America" referendum of the American Rose Society in 1923.

Etoile de France. Very dark crimson buds, and shining bright red, double, fragrant flowers. At its best in the cool weather of late autumn.

Francis Scott Key. An enormous, perfectly formed variety of glowing light red. It is generally best in autumn when it is astonishing in beauty and size.

Golden Emblem. A very dependable yellow Rose. Large, perfectly shaped blooms similar to Marechal Niel, borne in profusion.

Jonkheer J. L. Mock. Very large, full, and fragrant carmine blooms with deep shadings, silvery pink inside, borne on long, strong stems. It is an intensified La France. An abundant, continuous bloomer; fine for beds.

Kaiserin Auguste Viktoria. A perfectly formed white Rose of unusual beauty. Popular for many years.

Los Angeles. So fine a Rose in every way that no garden is complete without it. An attractive bud, opening to beautiful, silvery salmon-pink blooms.

Mme. Butterfly. A wonderful Rose—an intensified Ophelia. Beautiful spiral bud opening to a large flower of exquisite beauty; soft flesh, shaded rose; fragrant; lasts well when cut.

Mme. Edouard Herriot. An indispensable Rose made famous by winning the *Daily Mail* (London) Gold Cup in 1912. Coral-red, shaded yellow and bright rosy scarlet—beautiful color combination.

Mrs. Aaron Ward. The most profuse blooming yellow Rose. Semi-double, cup-shaped, deep Indian yellow, fragrant flowers. Extremely hardy. Seventh in the twelve "Favored Roses of all America" referendum by the American Rose Society a few years ago.

Ophelia. One of the most beautiful Roses. Soft salmon-flesh blooms, the center shaded light yellow at the base of the petals. Unequaled in form, coloring, and fragrance. A good cut-flower. Has large, dark green, leathery, disease-resistant foliage. Third in the twelve "Favored Roses of all America" referendum held by the American Rose Society in 1923.

Souvenir de Georges Pernet. Enormous, double, informal flowers of extraordinarily bright reddish pink shaded strongly with salmon and orange. A splendid, showy variety that is much admired.

Souvenir de Claudius Pernet. At present, the finest and most dependable yellow Rose. The color does not fade so badly as most yellows, and the flowers are freely and continuously produced. Excellent foliage.

White Killarney, Double. Large, long-pointed buds opening to large, loose, pure white, fragrant blooms, borne on long, strong stems by robust plants.

Six Favorite Varieties

We have selected from our regular stock six favorite varieties in a range of colors and are offering them at a moderate price. These varieties will be found in most Rose-gardens and we do not hesitate to recommend them.

Frau Karl Druschki. An immense, pure white, perfectly double Rose, sometimes nearly 6 inches in diameter, abundantly produced in June. If cut back after the first crop, it will bloom all summer, contrary to the general habit of Hybrid Perpetuals. Second in the twelve "Favored Roses of all America" referendum of the American Rose Society in 1923.

General MacArthur. An unusually good American Rose that has found favor in England. Brilliant glowing scarlet buds that open to strongly fragrant, full blooms; free bloomer. One of the best all-round Roses and a great favorite.

Gruss an Teplitz. One of the most useful and dependable Roses. Beautiful, clear crimson-scarlet, fragrant flowers, profusely borne till frost. Most desirable for bedding and a good hedge. Vigorous grower.

Radiance. Large, strongly fragrant, light silvery pink to salmon-pink flowers, borne profusely all summer on long, strong stems. First on the list of twelve "Favored Roses of all America" referendum held by the American Rose Society in 1923.

Red Radiance. A sport of Radiance and equally as good, differing only in the beautiful deep red color of the large globular flowers. Very hardy and of the greatest garden value.

Sunburst. Bright, glowing orange blooms, paling slightly at the edges of the petals; gives an excellent imitation of a real sunburst.

Price, 50 cts. each, \$1.35 for 3, \$5 per doz.
One of each variety, \$2.50

OUTSTANDING NEW ROSES

More than 150 new kinds of Roses are put on the market every year, but only a few of them are ever heard of again. It is expensive, and generally unsatisfactory to buy at random from the new introductions, but some of them are so valuable that they cannot be disregarded. Consequently, we have selected the best new varieties of the past few years, and offer them here in order that our customers may keep pace with the finest new Roses without the expense of testing the worthless sorts.



President Herbert Hoover

PRESIDENT HERBERT HOOVER. HT. Enormous flowers of ever-changing color. Deep copper-red in bud, golden in the center, with deep pink outer petals. In autumn it is superb. Plants very strong with good foliage, blooming early and often. \$1.50 each.

TALISMAN. HT. The most remarkable color yet produced in Roses—brilliant scarlet, shaded rose on one side of the petal and glowing golden yellow on the other, giving a startling red and yellow effect. Has long stems, and is continually in bloom. \$1 each.

E. G. HILL. HT. Gorgeous dark crimson-scarlet blooms full of delicately curled petals and intensely fragrant. Plants grow well and produce an unusual number of splendid flowers. \$1.50 each.

ETOILE DE HOLLANDE. HT. The best red Rose for garden use. Its flowers are gigantic, beautifully frilled, fragrant, and the color is deep, glowing crimson which does not fade. \$1 each.

MISS ROWENA THOM. HT. A descendant of Radiance and Los Angeles, with gigantic, globular blooms of glowing pink tinged with gold at the base. An extraordinary grower and always in bloom. \$1. ea.

REV. F. PAGE-ROBERTS. HT. Large flowers of most elegant shape and appealing color—soft buff-yellow shaded rich gold, stained on the outside of the petals with coppery red; very fragrant. One of the most beautiful and popular Roses grown. \$1 each.

LADY MARGARET STEWART. HT. Somewhat like Rev. F. Page-Roberts in general color-scheme, but the buds are longer and the colors are more deeply intensified, so that it is predominantly a golden yellow Rose. Tall, vigorous grower and free blooming. \$1 each.

MRS. ERSKINE PEMBROKE THOM. HT. Best of the clear unshaded yellow Roses. Flowers well shaped, of medium size, and richly yellow. Fine foliage and growth vigorous. Free flowering. \$1.25 each.

VILLE DE PARIS. HT. Tall, wiry growth with large, lemon-yellow flowers of loose, globular form. Attractive and unfading color. \$1 ea.

MRS. HENRY BOWLES. HT. Pointed buds of deep fiery pink opening to magnificent dark glowing pink flowers of superb form. \$1 each.

MRS. A. R. BARRACLOUGH. HT. Enormous long buds and giant flowers of deep salmon-pink tinged with rose, and lightened with yellow. Vigorous growth and free flowering. One of the most magnificent Roses in form and size. 85 cts. each.

MARGARET McGREDY. HT. Rich orange-red of intense hue. Flowers cupped, double, and most freely produced. Plants extraordinarily vigorous, with remarkably fine foliage and always in bloom. 85 cts. each.

SCHWABENLAND. HT. A large, double, fragrant, silvery pink flower. Bush robust and healthy. \$1.50 each.

AUTUMN. HT. Red and gold buds opening to large yellow and pink flowers of most spectacular appearance. The plant is extremely vigorous and blooms profusely throughout the summer and fall. \$2.50 each.

CHARLES P. KILHAM. HT. Coral-pink or brilliant reddish orange flowers of fine form and texture. This is a much improved Mme. Edouard Herriot. A good grower and will become very popular. \$1.50 each.

ROSLYN. HT. Remarkable for the large size and perfect form of its clear sunflower-yellow blooms. Plant grows well and produces perfect flowers. \$2.50 each.

BETTY UPRICHARD. HT. Splendid pointed buds of coral or deep coppery pink, opening to large, semi-double flowers with petals of light flesh-pink, reinforced by the intense coppery shading on the back. Strong growing; free flowering. 85 cts. each.

MEVROUW G. A. VAN ROSSEM. HT. Spectacular in its unusual combination of coppery old-gold and scarlet. The buds are globular, the open flowers incurved are a combination of orange-yellow and red. \$1.50 each.



Mevrouw G. A. van Rossem

Plants by Parcel Post.

If plants are to be shipped by parcel post, add to the prices given, 10 cts. for 1 plant, 20 cts. for 6 plants, 30 cts. for 12 plants.

CLIMBING ROSES

Present-day Climbing Roses are destined to make Rose-growing universal. Every one here listed is a strong grower, will endure neglect, bloom profusely, and after the June bloom-burst the foliage is attractive all summer. They may be used to cover porches, pillars, trellises and fences, unsightly objects, such as banks along farm-lanes, stone-piles, and ledges. Many other situations will suggest themselves to you as you study your own places. Can you picture anything more beautiful than the fence along the road festooned in June with beautiful Roses?

These hardy climbers need but little attention except pruning once a year, which is immediately after the flowering period is over. At such time very old or undesirable wood is removed. New wood will replace it and these new growths can be stopped anywhere by pinching out the tips.

By the judicious planting of Climbing Roses you can, at a small expense, increase the beauty of the home-grounds.

Price, 50c. each, \$5 per doz., except where noted. Postage extra. See page 55

American Pillar. A glorious Rose. Large clusters of bright carmine flowers with clear white eyes, that are intensified by bunches of golden yellow stamens. Each cluster is borne on a long, strong stem. A very vigorous climber, making plenty of strong canes, with large, leathery foliage.

Chaplin's Pink Climber. An improvement on the old-fashioned, cluster-flowering ramblers. The individual flowers are large, of a luscious shade of pink, and are produced with such an abundance as to completely conceal the plant and its support. \$1 each.

Climbing American Beauty. Moderately fragrant, rich rosy carmine, 3 to 4-inch blooms on long stems, profusely borne by a very vigorous, hardy plant. It will succeed in almost any situation once it has become established.

Crimson Rambler. A Japanese importation that immediately became popular. Great masses of crimson, semi-double flowers are borne by vigorous plants. Desirable as a pillar or porch plant but is particularly adapted to dry situations where others would winter-kill. Eleventh in the 1923 "Favorite Dozen Climbing Roses" referendum of the American Rose Society.

Dorothy Perkins. Clear cherry-pink, slightly fragrant flowers, borne in great profusion and lasting for a long time; they are double and the petals crinkled, which gives them a delightfully fluffy appearance. The bright glossy green foliage persists until frost. Fifth in the 1923 "Favorite Dozen Climbing Roses" referendum of the American Rose Society.

Dr. W. Van Fleet. The most popular climbing Rose, according to the American Rose Society's "Favorite Dozen Climbing Roses" referendum. Perfectly formed, long-pointed, deep pink buds on long stems, with several in a cluster, each expanding to about 4 inches. A vigorous grower with abundant, dark green, glossy, disease-resistant foliage that delights the eye all summer. Grows 20 feet or more high; bears hundreds of delicately perfumed blooms that make good cut-flowers.

Emily Gray. A splendid climber with leathery, glossy foliage of great beauty and large, tawny yellow flowers of most luscious aspect. One of the very few good yellow climbers, but will require protection from extremely low temperatures. 65 cts. each, \$6.50 per doz.

Jacotte. Medium-sized flowers of brilliant orange-yellow identical in tone with the Hybrid Tea, Independence Day. Extremely beautiful, hardy, and free flowering, and is rapidly becoming the most popular of the yellow or yellow-toned, hardy climbers. \$1.50 each.

Paul's Scarlet Climber. The purest red of all the pillar Roses. Clusters of semi-double, vivid scarlet flowers shaded crimson, that retain their color till they fall, never turning blue. Not a very tall climber but hardy and floriferous. 65 cts. each, \$6.50 per doz.

Primrose. (New.) Clear, light lemon-yellow flowers which do not fade white, and strong handsome foliage. The plant is harder than Emily Gray, but the color is not so richly golden, although deeper and finer than most other so-called yellow climbers. There are very few yellow climbing Roses worthy of the name, and by its hardiness Primrose is a marked improvement on the older sorts. \$1 each.

Scorcher. This blazing red climbing Rose comes from Australia. The flowers are large, ruffled, and of an intense fiery shade most difficult to describe. It surpasses Paul's Scarlet Climber in brilliance and it is not so harsh. One of the finest climbers in existence. \$2 each.

Silver Moon. A wonderful Rose. Immense, semi-double, pure white blooms 4 inches across, intensified by golden yellow stamens, are borne on long, stiff stems. Very strong-growing plants.



Scorcher



Paul's Scarlet Climber



Polyantha Roses

PEONIES

Peonies are among the most gorgeous plants that can be grown in a garden. Given a deep, rich soil and a sunny situation they will thrive anywhere. A mulch of manure each fall will help to maintain them. Plant the roots 2 to 3 inches below the surface of the ground. Strong divisions with 3 to 5 eyes, and plenty of roots, and larger size than usually secured from the growers.

Price, 50 cts. each, \$5 per doz., except where noted

Charlemagne. Large, globular, rose to lilac-white blooms, with slight blush center; fragrant. Late.

Delache. Large, rosy magenta, rose type blooms. Midseason to late.

Edulis Superba. Large, loose, dark pink, crown type blooms. An extra-good variety for marketing. Early.

Festiva Maxima. Very large, pure white, globular type flowers; center petals sometimes flecked crimson. A vigorous grower and abundant bloomer. The most popular white for cut-flowers.

Fragrans. Medium-sized, dark pink, bomb type blooms, with silvery reflex; fragrant. Late.

Francois Ortegat. Very striking, semi-double, purplish crimson blooms with brilliant golden anthers.

Golden Harvest (Jeanne d'Arc). Soft pink outer petals inclosing a ball-like, golden yellow center. Early-flowering and very dainty.

Grandiflora Rosea. Light rose; outer petals very large, inner smaller and bunched. A vigorous grower.

Louis Van Houtte. Very brilliant, deep carmine-rose blooms, tipped with silver and a fiery reflex; medium size; fragrant. Late.

Nigricans. Semi-rose, globular blooms of very deep rich, dark crimson. Particularly good for landscaping, also for cutting. Mid-season to late.

Rosea Superba. Medium to large, pale lilac-rose blooms, center tipped cream-white. Good market bloom. Early to midseason.

Peonies to Color

Strong-growing plants of selected varieties that will be sure to please. By color only. **Red, White, or Pink.** 30 cts. each, \$3 per doz.

Peony Aristocrats

KARL ROSEFIELD. Large, double, rose-shaped flowers of very bright crimson, almost scarlet. Very fine variety. 90 cts. each.

MONS. JULES ELIE. Gigantic flowers of silvery mauve-pink with a high, compact center. Early-flowering. 90 cts. each.

OCTAVIE DEMAY. Large, pale pink with crimson markings. Like a very highly refined Cactus Dahlia. 75 cts. each.

SARAH BERNHARDT. Deep rose-pink. Fragrant and beautiful. \$1 each.

REINE HORTENSE (President Taft). Crisp, fluffy flowers of light rose-pink, silvered at the edges. Bold and handsome. 90 cts. each.

Peony roots are postpaid at prices given

POLYANTHA or BABY RAMBLER ROSES

These dwarf Roses produce an abundance of bloom all season. They average 18 inches in height.

Price, 65 cts. each, \$6.50 per doz. Postage extra. See page 55.

Erna Teschendorf. Small, double red flowers in clusters.

George Elger. Sprays of yellow buds that open lighter.

Golden Salmon. Scarlet-orange flowers in big clusters.

La Marne. Salmon-pink and blush-pink.

Miss Edith Cavell. Large clusters of small, semi-double, brilliant scarlet-red flowers, shaded darker.

Yvonne Rabier. Clusters of small, pure white flowers with creamy bases.

HYBRID PERPETUAL ROSES

These, because of their wealth of bloom, named June as the month of Roses. They are much hardier, stronger growing plants than the Hybrid Teas and bear an immense crop of bloom in June. They may, if closely pruned after the first big crop, give a few scattering blooms in the late summer or early fall.

Set the plants 2½ feet apart to insure plenty of room. Prune each spring before growth starts; the amount to cut back depends upon the habit of the plant. More vigorous plants should be less severely cut back than the weaker ones; the harder they are cut the more wood they make.

Price, 65 cts. each, \$6.50 per doz. Postage extra. See page 55.

American Beauty. A dark pink, very full and fragrant variety which used to be very popular as a florists' cut-flower and has been reasonably good outdoors in certain localities.

General Jacqueminot. A very popular old Rose known to everybody as the "Jack" Rose. Rich crimson, deliciously fragrant, and highly prized both for its beauty and its old-time associations.



Peonies

FLOWERING SHRUBS

There is not a farm nor suburban home that cannot be greatly improved by the use of a few good flowering shrubs. There are no hard and fast rules to follow when beautifying the home-grounds, other than that vistas or views should be retained or made—not spoiled or shut out by a misplaced tree or shrub. Irregular groups or masses of shrubs should surround the buildings and follow the fences or outline the yard, with an open space for lawn.

Flowering shrubs thrive on any land that will grow corn or potatoes. No diseases nor insects of any great importance infest them, so they seldom need spraying. Fertilizing once a year with some commercial fertilizer, or well-decayed stable manure, and pruning are all they require. Pruning, however, is an important piece of work, for the year's crop of flowers can be quickly lost by pruning at the wrong time. All of the shrubs offered in this list, with the exception of the *Althæa*, *Hydrangea*, and *Spiræa*, Anthony Waterer, are pruned in the summer immediately after flowering.

Plants by Parcel Post. Add to the prices given, 10 cts. for 1 plant, 20 cts. for 6 plants, 30 cts. for 12 plants.



Calycanthus floridus



Deutzia gracilis



Japanese Snowball. See page 59

ALTHÆA. Rose of Sharon. A very useful shrub with large, single or double flowers in great profusion in late summer, a time when flowering shrubs are scarce.

Pink, Purple, Red, or White varieties. 2 to 3 ft., 50 cts. each, \$5 per doz.

ALMOND, Flowering (*Amygdalus*). The pink, double flowers are produced in great abundance during May and are very fragrant. 2 to 3 ft., 90 cts. each, \$9 per doz.

AZALEAS. These hardy Azaleas bloom with the utmost freedom, becoming solid masses of flowers at their season, and continuing in splendor for several weeks. The plants enjoy a slight shade. A position sheltered from severe winter winds is advisable.

Amœna. Brilliant reddish purple flowers completely cover every twig. A very showy and hardy sort. Evergreen. \$3 each.

Hinodegiri. A sparkling red variation of Amœna, with no trace of the purple. Evergreen. \$3.75 each.

Mollis. A dwarf, very bushy, deciduous variety. Flowers shade from light yellow to apricot and deep orange. \$2.50 each.

BEAUTY BUSH. An exceedingly handsome ornamental shrub. The foliage and habit are attractive when the bush is out of flower and it is perfectly hardy. It grows 6 to 9 feet high when mature, and as much through, erect and twiggy, producing long, arching branches covered in spring with clusters of small, tubular flowers of the honeysuckle type, borne in such profusion that the bush is one cloud of delicate pink. Beauty Bush has all the merits of a perfect shrub—hardiness, year-round beauty in foliage and habit, and amazing profusion of flowers of beautiful color. 2 to 3 ft., \$1 each.

CALYCANTHUS floridus. Sweet Shrub. This is the popular old-fashioned "Strawberry Shrub," with brown, sweet-scented, starry flowers, followed by pods of smooth brown seeds. 15 to 18 in., 60 cts. each, \$6.50 per doz.

DEUTZIA, Pride of Rochester. A very popular bluish-white form, growing taller and bushier than *D. gracilis*. 2 to 3 ft., 50 cts. each, \$5 per doz.

Deutzia gracilis. Slender Deutzia. A small shrub with slender, often arching branches covered with pure white flowers in graceful nodding racemes. Good for edging borders. 1 to 1½ ft., 50 cts. each, \$5 per doz.

DOGWOOD, Coral (*Cornus alba sibirica*). An upright shrub having bright coral-red branches with dark green leaves, pale beneath, and creamy white flowers in numerous flat-topped clusters, followed by bluish fruits. 2 to 3 ft., 50 cts. each, \$5 per doz.

Cherry, Variegated Cornelian (*C. mas elegantissima*). One of the finest variegated shrubs and a rapid grower. The leaves are broadly margined with white, and some are entirely white. 1½ to 2 ft., 50 cts. each, \$5 per doz.

FORSYTHIA. One of the very earliest shrubs to bloom and unsurpassed in splendor and brilliancy by other spring-flowering varieties. Branches are covered with golden yellow blooms in early spring.

Suspensa. A large, arching shrub with long, slender branches adorned by brilliant yellow flowers in early spring. Strong plants, 50 cts. each, \$5 per doz.

Spectabilis. Sturdy, erect bush with an unbelievable abundance of golden yellow flowers a shade or two darker yellow than any other variety. 2 to 3 ft., 50 cts. each, \$5 per doz.

HONEYSUCKLE, Red Tartarian (*Lonicera tatarica sibirica*). A bushy shrub, reaching 10 feet, with crimson flowers in June, followed by red fruits. 2 to 3 ft., 35 cts. each, \$3.50 per doz.

White Tartarian (*L. tatarica alba*). About the same as the above except that the flowers are white. 2 to 3 ft., 35 cts. each, \$3.50 per doz.

HYDRANGEA paniculata grandiflora. Big conical trusses of white flowers that soon assume rose and bronze tones, are borne in late summer and last till frost. Severe pruning in early spring brings big trusses of bloom. 2 to 3 ft., 50 cts. each, \$5 per doz.

Tree-form. 3 to 4 ft., \$1.50 each.

HYPERICUM Moserianum. Gold Flower. A very beautiful dwarf shrub of compact habit and beautiful foliage. Flowers a clear yellow, resembling a single rose. 1½ to 2 ft., 75 cts. each, \$7.50 per doz.

INDIAN CURRANT (*Symphoricarpos vulgaris*). Tall, slender shrub, with coral-red fruits. 2 to 3 ft., 35 cts. each, \$3.50 per doz.

JAPAN QUINCE (*Cydonia japonica*). Often called "Fire Bush." Scarlet and vivid pink flowers. Very early. 2 to 3 ft., 60 cts. each, \$6 per doz.

LILAC (*Syringa*). A great favorite in old gardens. Many a Lilac bush cherished by some hardy pioneer woman is all that remains to mark an old homestead. Late in May the bush is crowned with many purple or white spikes of fragrant flowers.

Common Purple. 2 to 3 ft., 50 cts. each, \$5 per doz.

Lilac. Tree-form. Named French varieties:

Belle de Nancy. Large, double pink or satiny rose flowers. A beautiful Lilac.

Ludwig Spaeth. Deep reddish purple flowers in long clusters. Very unusual.

President Grevy. Enormous heads of nearly true blue flowers.

Above three Lilacs, 2 ft., 90 cts. each

MOCK ORANGE, Sweet (*Philadelphus coronarius*). An upright shrub, 8 feet high, with arching branches that bear, in June, a wealth of pure white, very fragrant flowers in clusters. Each flower is about an inch across with clusters of golden yellow stamens. 2 to 3 ft., 50 cts. each, \$5 per doz.

Golden (*P. coronarius aureus*). An attractive golden-leaved form of the preceding. 1½ to 2 ft., 50 cts. each, \$5 per doz.

Virginal. A vigorous, tall grower, with very large, double-crested, pure white, sweetly scented flowers. One of the most beautiful varieties. 2 to 3 ft., 65 cts. each, \$6.50 per doz.

SNOWBERRY (*Symphoricarpos racemosus*). Small, rose-colored flowers in June and July, followed by large clusters of pearly white fruit which endure into the winter. 2 to 3 ft., 50 cts. each, \$5 per doz.

SNOWBALL (*Viburnum opulus sterile*). The old-fashioned Snowball. A large shrub with white, ball-like clusters of flowers in May and June. Very decorative. 2 to 3 ft., 60 cts. each.

Japan (*V. tomentosum plicatum*). A rare and beautiful species from Japan. Large, globular, pure white flowers in May and June. The fall coloring of the foliage is especially fine. 1½ to 2 ft., 85 cts. each, \$8.50 per doz.

SPIRÆA, Anthony Waterer. Bright rosy crimson flowers in dense corymbs produced abundantly from July till frost. Fine for facing plantings of larger shrubs or edging walks. 1 to 1½ ft., 35 cts. each, \$3.50 per doz.

Korean. A large, handsome, fountain-shaped bush with broad clusters of creamy white flowers in late spring. 2 to 3 ft., 75 cts. each, \$7.50 per doz.

Thunbergi. A low-growing shrub with fine, delicate foliage, and a profusion of small white flowers in spring. 2 to 3 ft., 35 cts. each, \$3.50 per doz.

Spiræa Van Houttei. One of the most beautiful spring-blooming shrubs. The arching branches bend to the ground under the immense number of corymbs of small white flowers. 2 to 3 ft., 30 cts. each, \$3 per doz.

STEPHANANDRA flexuosa. A graceful shrub seldom more than a few feet high, with twiggy branches adorned with jagged, toothed foliage which remains in good condition all season. Cream-colored flowers in June. This is an excellent plant for growing in the shade of other shrubs or trees. 2 to 3 ft., 65 cts. each, \$6.50 per doz.

WEIGELA, Eva Rathke. An upright shrub 5 to 6 feet high, with arching branches covered in late May with an abundance of slightly fragrant, rich reddish purple, trumpet-shaped flowers 1½ inches long and 1 inch in diameter. 2 to 3 ft., 65 cts. each.

rosea. An attractive shrub with spreading branches covered with dark green foliage and trumpet-shaped, slightly fragrant, rose-colored flowers. 2 to 3 ft., 50 cts. each, \$5 per doz.

Variegated. An exceedingly pretty variety with finely variegated foliage which lasts the entire season and is very distinct. Rose-colored flowers in June. 1½ to 2 ft., 50 cts. each.

Ornamental Trees

CRAB, Bechtel's Double-flowering (*Malus*). Delicate pink blossoms in the spring and handsome fruits in the fall, which are attractive to the birds. 2 to 3 ft., 75 cts. each.

PLUM, Purple-Leaf (*Prunus pissardi*). This little tree has deep purple leaves which retain their color until fall. In the spring it is covered with fine white flowers followed by wine-red fruit. Handsome adornment for the lawn. 3 to 4 ft., \$1 each.

Trained Boxwood

A splendid evergreen for use in groups or as individual specimens on the lawn or for planting in vases or tubs for decorative effect. Roots are balled or burlapped.

Globe or Ball-shaped. 12- to 15-in. diam., \$3 each.

Pyramidal-shaped. 18 to 21 in. high, \$4.50 each.



Flowering Almond. See page 58



Mock Orange, Virginal



Hypericum Moserianum. See page 58



Hydrangea paniculata grandiflora. See page 58



Rock-Garden Plants

Rock-gardens have become very popular in America, and lawns and back yards from the Atlantic to the Pacific are being rapidly transformed into miniature mountain ranges, rocky cliffs, and stone-piles, as the genius and resources of gardeners permit.

One of the hindrances to successful rock-gardens in this country is the lack of interesting and beautiful plants to grow in them. Too many people plant annuals, and border perennials in the rock-gardens, losing the entire effect and half the fun of this fascinating hobby.

True rock-garden plants are usually natives of stony places and thrive to perfection only when given similar accommodations in the garden. We have assembled here a good collection of representative rock plants, which combine both variety and dependability.

To build a successful rock-garden, a slope or bank is almost necessary to permit laying up the stones to make the proper crevices. A dry wall, made very thick at the base and sloping backward 3 inches to every foot of height, is an excellent substitute for a rock-garden, and may serve a useful purpose. Dry walls are built of rough stones, undressed, laid up in good rich soil without mortar.

The invariable rule of rock-garden construction is to lay all stones on their broadest face and tilt them all backwards so that rain will run into the earth instead of off it. Try to imitate a natural ledge with only a very small portion of each rock above ground. The stones are put in for the prosperity of the plants and not to look at.

Price, 35 cts. each, \$1 for 3, \$3.50 per doz., except where otherwise noted. If wanted by Parcel Post, add 10 cts. extra for each plant, 15 cts. for 3, 25 cts. per doz.

ARABIS alpina. Rock Cress. White flowers borne in dense masses. Easily grown and blooms in early spring.

ARENARIA montana. Sandwort. Close tufts covered with small silvery white flowers. Blooms very early.

ARMERIA Laucheana rosea. Thrift; Sea Plant. Bright rosy red. Grows 3 to 6 inches high. Blooms May and June.

ASTER alpinus. Large, daisy-like flowers, bright lavender-blue. July and August. 12 inches high.



Aster alpinus



Arabis alpina

ROCK-GARDEN PLANTS, continued

AUBRIETIA deltoidea. Purple Rock Cress. Wonderful mats of brilliant red-purple and violet toned flowers in early spring. Height 3 inches. 50 cts. each, 3 for \$1.35.

BELLIS perennis. Double Daisy. Low-growing, spring-flowering, semi-hardy perennial that is good for shady places. White, Pink, and Red.

CAMPANULA carpatica. Bellflower. Blue. A pretty species grown in compact tufts not exceeding 8 inches.

CERASTIUM tomentosum. Snow-in-Summer. A low-growing plant having silvery white foliage; an abundance of snow-white flowers.

CHEIRANTHUS Allioni. The Siberian Wallflower is about 18 inches high. The small, vividly orange flowers are among the showiest things in nature. This is a biennial and should be raised from seed every year.

DIANTHUS deltoidea rosea. A beautiful little plant with narrow leaves bearing a profusion of small crimson flowers.

GEUM (Avens), Mrs. Bradshaw. A splendid new variety with large, double flowers of fiery red.

Lady Stratheden. New. Double; rich golden yellow.

HELIANTHEMUM. Rock or Sun Rose. Low-growing evergreen plants that form broad clumps and are a mass of blooms from July to September.

IBERIS gibraltarica. Hardy Candy-tuft. Compact; lilac flowers.

sempervirens. Pure white flowers in spring. Dark glossy evergreen leaves. Fine edging plant.

LINUM. Flax. A desirable plant for border or rockery, growing 2 feet high. Light, graceful foliage and large flowers all summer.

MYOSOTIS palustris. Forget-me-not. A lovely dwarf plant for damp places. Spreads rapidly and carpets the ground.

NEPETA Mussini. A cushiony, round-leaved, aromatic plant with bright lavender-blue flowers.

ÆNOTHERA Youngi. Evening Primrose. A stalky, large-leaved plant with firm, shiny foliage and bright lemon-yellow flowers.

PAPAVER alpinum. Silky orange-yellow flowers on slender stems 15 inches high. Very bright and pretty.

PHLOX subulata. Moss or Mountain Pink. An early spring-flowering, moss-like plant with evergreen foliage.

Alba. Pure white.

Fairy. Pale blue.

Rosea. Rose-pink.

PRIMULA Veris. (Hardy Primrose.) This strain includes various shades of violet-purple and lilac, as well as buff-orange and salmon. 50 cts. each, 3 for \$1.35.

SAPONARIA (ocymoides). A spreading, leafy plant with bright pink flowers throughout most of the season. Height 6 inches.

SAXIFRAGA cordifolia. Big, bold foliage 1 foot or more across, and clusters of bright pink flowers on stout stems in late March and early April.

SEDUM acre. Golden Moss. Low, tufted perennial that spreads over the ground. Bright yellow flowers.

album. A beautiful, glistening, waxy sort of plant of great vigor with delicate, frost-like flowers in midsummer.

kamtschaticum. A bold, leafy plant 6 inches high with broad heads of brassy yellow flowers.

Lydium. Bronze foliage. Pink flowers in July.

sarmentosum. Rapid-growing plant with yellowish green foliage and yellow flowers in May and June.

Sieboldi. Round, succulent glaucous foliage. Bright pink flowers in August and September.

spectabile. One of the prettiest erect-growing species with broad, light green foliage and immense heads of handsome, showy, rose-colored flowers.

stoloniferum. One of the most desirable. Evergreen leaves and purplish pink flowers in July and August.

THYMUS Serpyllum coccineum. An aromatic creeper less than 1 inch high, with dull crimson flowers in midsummer. Fine for paving-stones and wall crevices.

TUNICA Saxifraga. Tufted plants 6 inches high with pinkish white flowers on wiry stems. Very graceful.

VERONICA. Speedwell. A low-growing perennial on the foxglove order. Flowers White, Blue, and Pink.

VINCA minor. A tufted, evergreen, half-trailing plant. Dark, leathery foliage and large, purple-blue flowers. Useful in dry, shady places.

VIOLA. Tufted Pansies. Best edging plant for hardy perennial border. Will bloom from May to October.

Admiration. Giant deep blue-purple.

Apricot. Exquisite apricot-yellow.

Rosy Gem. Deep violet-blue.

Mauve Queen. Light blue.

Jersey Gem. Rich pure violet.

White Perfection. Fine white.

Yellow Perfection. Fine yellow.

"Rock Gardens," by F. F. Rockwell. A complete treatise on the subject. \$1.

"Rock Garden Primer," by Archie Thornton. \$2.



Cerastium tomentosum (Snow-in-Summer)



Viola, Jersey Gem



Primula (Hardy Primrose)



Sedum Sieboldi

Tufa Rock. Porous. Lighter than the ordinary rock. 50 lbs. \$1.25; 100 lbs. \$2.

Hardy Perennial Plants

Hardy perennial flowers are depended on to give the garden continuity from year to year and to afford that appearance of settled contentment and quietude which comes with their increased size and reappearance in the same places year after year.

If the ground is well prepared by deep spading and fertilizing, they will need little attention beyond keeping the surface hoed and the weeds pulled for the first year—after that they are usually big and strong enough to take care of themselves.

The plants which we offer are grown locally, two years old, and *freshly* dug.

Price, 35 cts. each, \$1 for 3, \$3.50 per doz., except where otherwise noted. If wanted by Parcel Post, add 10 cts. extra for each plant, 15 cts. for 3, 25 cts. per doz.

AQUILEGIA (Columbine), Mixed Hybrids. Wonderful colors; very long-spurred flowers.

ARTEMISIA, Silver King. Sage Bush. A striking white-leaved contrast plant. Beautiful for setting off bouquets or floral combinations.

ASTERS, Hardy. Michaelmas Daisy. Beautiful starry flowers in shades of lavender-blue and pink produced in great profusion in late summer.

BUDDLEIA magnifica. Butterfly Bush. Large, deep rose-purple flowers in dense spikes from mid-August on.

CAMPANULA calycanthem. Cup-and-Saucer. Large, double flowers resembling a cup and saucer. Mixed colors.

Medium. Single Canterbury Bell. Mixed colors.

CARNATION, Hardy Border. A good hardy strain for outdoor culture. Flowers in a great variety of colors are borne from May to October.

Crimson King. Flowers bright red. Very prolific bloomer from July to November.

CENTAUREA montana. Hardy Cornflower. Grows 2 feet high. Violet-blue flowers from July to September.

CHRYSANTHEMUMS, Hardy. Bloom after other flowers have gone. **Bronze, Pink, Red, White, Yellow.**

Eva. Large pink flowers October to December. Pretty blooms when most other flowers are gone. Grows about 7 to 10 inches high. 50 cts. each, 3 for \$1.35.

COREOPSIS grandiflora. Tickseed. Bright yellow single flowers on long, branching stems. Will bloom all summer if flowers are kept cut. 25c. each, 65c. for 3, \$2.25 per doz.

DELPHINIUM, Gold Medal Hybrids. Hardy Larkspur. Very long spikes of the choicest colors.

Wrexham Hollyhock-flowered Strain. New giant-flowered strain of superior quality. Flowers come in blue, white, and pink combinations—many of them bicolor.

Belladonna. Light sky-blue.

Bellamosa. Dark blue.

DIANTHUS plumarius. Hardy Pinks. Low-growing, grass-like foliage; flowers clove-scented; wide range of colors. 25 cts. each, 65 cts. for 3, \$2.25 per doz.

barbatus. Hardy Sweet William. Large heads of red, white, and pink flowers in early summer. 25 cts. each, 65 cts. for 3, \$2.25 per doz.

DICENTRA spectabilis. Bleeding-Heart. An old-fashioned favorite. Its long racemes of graceful, heart-shaped pink flowers are always attractive. 65 cts. each, \$1.75 for 3.

DIGITALIS. Foxglove. Spikes of tubular flowers in mixed colors, White, Rose, and Purple.

GAILLARDIA grandiflora, Mixed. Blanket Flower. Large orange-yellow, scarlet, and crimson flowers in profusion. Very valuable for cutting. 25 cts. each, 65 cts. for 3, \$2.25 per doz.

GYPSOPHILA paniculata. Baby's Breath. Small white flowers on branched stems so thick as to give the plant a white lace-like effect. Excellent for cut-flowers.

Bristol Fairy. Double pearly white flowers larger than the old-fashioned type, and produced abundantly all season. Very lovely for cutting. 75 cts. each.



Hardy Chrysanthemums



Gaillardia grandiflora



Delphinium



Heuchera



Digitalis (Foxglove)

HARDY PERENNIAL PLANTS, continued

HEUCHERA sanguinea. Coral Bells. Bright crimson flowers from June to September. Very free flowering.

HIBISCUS. Marsh Mallow. Strong, almost shrubby plants with gigantic Red, White, or Pink flowers.

HOLLYHOCKS, Double Mixed (*Althaea rosea*). Bold, spire-like stalks of bloom varying from red to white, also yellow.

IRIS, German. Flag. Superbly colored varieties of this popular garden plant. 25 cts. each, 65 cts. for 3, \$2.25 per doz.

Japanese. White, gold, or blue flowers. Flowers very attractive.

sibirica. A vigorous, free-flowering blue variety of easy culture.

LILY-OF-THE-VALLEY. A dainty plant for shady places. Fragrant, bell-like, white flowers in May. A good ground-cover. Clumps, 25 cts. each, 65 cts. for 3, \$2.25 per doz.

LUPINUS polyphyllus, Mixed. Grows 2½ to 3 feet tall and produces White, Pink, or Lavender-Blue flowers.

PAPAVER nudicaule. Iceland Poppy. Grows 1 foot high, with very pretty single, crinkled flowers in White, Salmon, Yellow, or Orange.

orientale. Oriental Poppy. Immense, single, bright scarlet flowers in spring.

PENTSTEMON barbatus Torreyi. Beard Tongue. Spikes of brilliant scarlet flowers. Grows 3 to 4 feet high.

PHYSALIS Francheti. Chinese Lantern Plant. An ornamental variety of the Winter Cherry, with orange-scarlet lantern-like fruits.

PYRETHRUM hybridum. Persian or Painted Daisy. A good hardy perennial with fern-like foliage. Fine for cutting or planting in the hardy border. Red, White, or Pink.

PHLOX. A universal favorite and the most showy of garden plants. They grow 2 to 3 feet high, according to variety, and have large heads of bloom. Thrive in a cool, moist, well-drained soil.

B. Comte. Dark red.

Beacon. Brilliant cherry-red.

Commander. Crimson red with darker eye.

Elisabeth Campbell. Light salmon, shading to pink at center.

Enchantress. Salmon-pink.

Fernand Cortez. Deep crimson.

Fraulein G. von Lassburg. Pure white.

Lothair. Bright crimson.

Miss Lingard. Pure white, pale pink centers. The most popular and earliest white.

Mrs. Charles Dorr. Lavender. Blooms June to October.

Phlox, continued

Rheinlander. Large, salmon-pink flowers.

Rijnstroom. Rose-pink.

R. P. Struthers. Cherry-red, suffused salmon.

Thor. Salmon-pink suffused scarlet.

Widar. Reddish violet.

Price of Phlox: Roots, 20 cts. each, 50 cts. for 3, \$1.75 per doz.; plants, 35 cts. each, \$1 for 3, \$3.50 per doz.

PHYSOSTEGIA virginiana. Erect plants, 3 to 6 feet high, with rigid spikes of delicate lavender-pink flowers in late summer. A very useful tall border plant.

PLATYCODON grandiflorum. Balloon Flower. A very good hardy perennial producing large, showy, steel-blue flowers the whole season. Excellent for borders.

SCABIOSA caucasica. Pin-Cushion Flower; Mourning Bride. Flowers a soft shade of lavender. Grows 1½ to 2 feet high and blooms from June to September.

SHASTA DAISY (Chrysanthemum maximum), Alaska. Pure white blooms 4 to 5 inches across with yellow centers. 25 cts. each, 65 cts. for 3, \$2.25 per doz.

STATICE latifolia. Sea Lavender. Invaluable for cutting. Attains a height of 1 to 2 feet. Purplish blue flowers.

SWEET WIVELSFIELD. An unusual, handsome race of China Pinks. Fragrant and everblooming. 25 cts. each, 65 cts. for 3, \$2.25 per doz.

THALICTRUM adiantifolium. Vigorous plants with maidenhair foliage and feathery clusters of yellowish flowers.

TRITOMA pfitzeri. Red-Hot Poker. Spikes of orange-scarlet flowers.

VALERIANA officinalis. Flat heads of white flowers. Strong heliotrope scent. An old-fashioned favorite.

YUCCA filamentosa. Adam's Needle. Broad, sword-like, evergreen foliage and large, drooping, creamy white flowers on stems about 6 feet high.



Gypsophila, Bristol Fairy



Pyrethrum hybridum



Valeriana officinalis



Hardy Phlox

FRUIT DEPARTMENT

Why not use fruit trees instead of shade trees for the front lawn? They cast a good shade, especially the apple tree, and in the spring they are covered with a wealth of bloom that no shade tree can equal. In addition, they produce fruit of which but few persons have enough. In making the selection of fruits to offer our customers, we believe the following will give the best results in the districts where they live. All fruit trees offered are No. 1 grade and are f.o.b. cars, Pittsburgh, Pa. Orders for Fruit Trees should be placed before March 15.



Baldwin Apple

Apples

Two-year-old budded trees, 60 cts. each, \$5 for 10

- Baldwin.** Best all-round winter Apple in northern counties.
Delicious. The finest dessert Apple imaginable; midwinter.
Duchess of Oldenburg. Tart; midsummer.
Early Harvest. Fruit yellow; flesh white, crisp and juicy. Good for cooking. Early summer.
Grimes Golden. Delicious flavor all its own; early winter.
Jonathan. Beautiful red spicy-flavored fruits; early winter.
Maiden's Blush. Medium, smooth, pale yellow with red cheek. Late fall.
McIntosh. Spicy; bright red; late fall sort.
Northern Spy. Desirable winter sort for northern counties.
Red Astrachan. Best summer dessert and cooking Apple.
Rome Beauty. Handsome fruits of good quality; midwinter.
Stayman. Juicy, melting flesh; midwinter.
Wealthy. High quality, early fall sort.
Winesap. Dark red, juicy, high quality winter Apple.
Yellow Transparent. Earliest ripening Apple; good cooker.

Pears

Two-year-old budded trees, 65 cts. each, \$5.50 for 10

- Bartlett.** Without doubt the best dessert and canning Pear.
Clapp's Favorite. Superb large yellow fruits; early.
Duchesse d'Angouleme. Big, rich-flavored fruits; late.
Kieffer. A fine culinary Pear; keeps well in storage.
Seckel. Small, delicious fruits; extremely popular.

Plums

Two-year-old budded trees, 65 cts. each, \$5.50 for 10

- Bradshaw.** Fine, large, early, juicy Plum; early August.
Fellenberg. Delicious, juicy flesh; fine for drying.
German Prune. High-quality fruits; stands more frost than others; late August.
Green Gage. Large, greenish fruits, fine for canning.
Lombard. Handsome reddish fruits with pleasant, juicy flesh.
Shropshire Damson. Like Damson but larger, fine for butter.
York State Prune. One of the largest and best quality Plums.

Peaches

Two-year-old budded trees, 35 cts. each, \$3 for 10

- Champion.** Deliciously flavored white Peach following Carman.
Crawford Early. Yellow and of unexcelled quality.
Crawford Late. A fine yellow Peach of finest flavor.
Elberta. The standard yellow; large, highly flavored, juicy fruits in early September.
J. H. Hale. Big yellow fruits of high quality; late August.
Lemon Free. The hardiest Peach; will stand more frost than others; high quality; fine for canning.
South Haven. *New.* A variety similar to Elberta but two to three weeks earlier. Productive, well-flavored, and possesses all the good shipping qualities of the original Elberta.

Quinces

Two-year-old budded trees, 80 cts. each, \$7 for 10

- Champion.** Large, late-ripening sort of high quality.
Orange. A mighty fine-quality variety and extremely popular.

Sweet Cherries

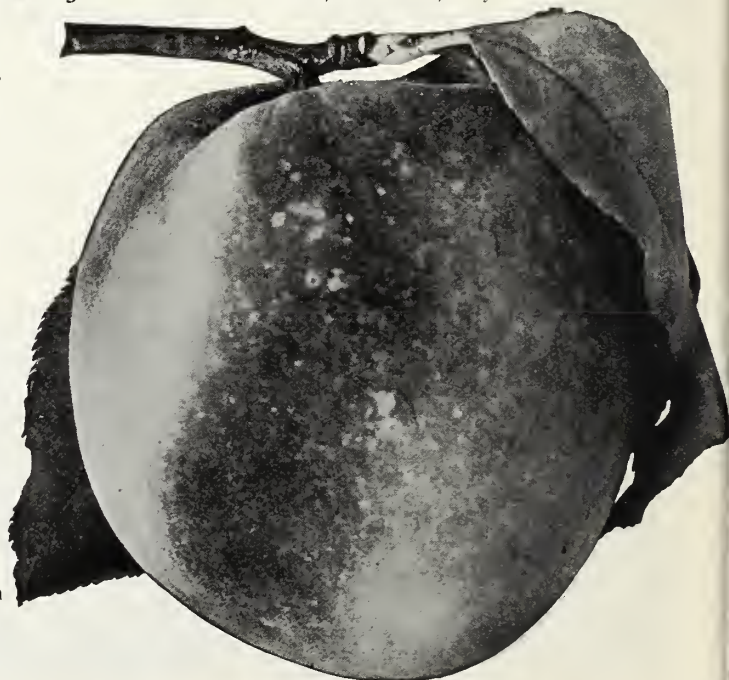
Two-year-old budded trees, 75 cts. each, \$6.50 for 10

- Black Tartarian.** Fine old fruitful sort; black fruits; late.
Governor Wood. A fine home sort; russet yellow.
Napoleon. Prolific; yellow with red cheeks; midseason.
Windsor. Large, liver-colored; hangs long time; very late.

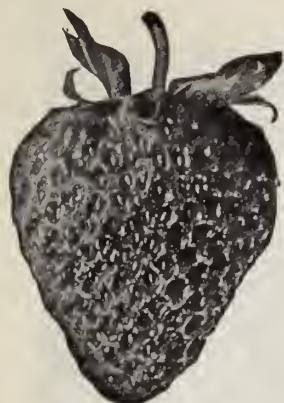
Sour Cherries

Two-year-old budded trees, 65 cts. each, \$5.50 for 10

- Early Richmond.** Popular early fruit; good cooker.
Montmorency. The best sour Cherry; heavy crops; midseason.
English Morello. Dark red; rich fruits; very late.



Elberta Peach



Premier Strawberry

STRAWBERRY PLANTS

Strawberries in the Garden. No home-garden is complete without a bed or a few rows of Strawberries. This earliest and most delicious fruit, coming at a time when no other fresh fruit can be had, is liked by everybody. By planting some everbearers in addition to the early varieties, you can have fresh berries for the table from June to November, or until freezing weather sets in. What greater pleasure than picking your daily supply of fresh ripe berries "right off your own vines"?

Strawberries for Profit. We know of no other crop that produces equal returns for the acreage planted or the time and labor expended. Market-gardeners and farmers are beginning to appreciate the enormous and ever-increasing demand for fancy home-grown berries and are limiting their acreage only to the amount they are able to take care of at picking-time.

Our Plants. The plants we offer are "new-ground plants" grown in virgin soil in one of the best plant-growing districts of the Northwest. They are large, strong, fully developed plants, ready to make a quick, steady growth the first year.

Order Early. The earlier you order the surer you are to get the varieties you want. Strawberry plants should be set out as early in spring as the ground can be prepared, the earlier the better. The plants will be sent as soon as they can be dug in the spring and if your ground is not ready, heel them in and cover with straw until you plant them.

DISTANCE FOR PLANTING AND PLANTS REQUIRED PER ACRE
 Commercial use. $3\frac{3}{4}$ ft. x $1\frac{1}{2}$ ft. 7,920 plants
 Garden use. $2\frac{1}{2}$ ft. x $1\frac{1}{2}$ ft. 11,600 plants
 Everbearing Strawberries. $2\frac{1}{2}$ ft. x $1\frac{1}{2}$ ft. 11,600 plants

Extra-Early

Premier. The best early Strawberry without a fault. Excellent in quality, color and flavor. Its unusual firmness makes it an ideal shipper. The best early commercial berry today.

Second-Early

Cooper. The largest Strawberry ever produced. Ripens with second earlies. Berry has a sweet, delicious flavor. A new large and vigorous variety that built its reputation in one year.

Senator Dunlap. For many years has been grown as the main-crop berry throughout the country. Will produce a full crop in a wider range of soil and climate than any other variety. A very heavy bearer of good-sized, uniformly shaped berries of beautiful dark red color.

Dr. Burrill. This is truly a most remarkable Strawberry—one of the best all-round varieties ever produced. Fruits from mid-season until late and is a ready seller on the market. As a dry-weather producer it cannot be beat, the long roots taking moisture from a greater soil-depth and producing heavier foliage and crops than most varieties under similar dry-season conditions.

Medium Late

Gibson. Produces two to four fruit-stems on each plant, making it one of the heaviest bearing Strawberries. Fruit of fine quality, texture, and flavor. Excellent for table use, canning, or market. Thrives in all soils and climates.

CURRENTS

Two-year-old plants, 20 cts. each, \$1.75 for 10

Fay. Medium to long clusters of dark red, juicy fruits.

Perfection. Large, bright red fruits; big clusters.

Wilder. Medium-sized, mildly acid berries in large clusters.

GOOSEBERRIES

Two-year-old plants

Downing. Whitish green. The most widely planted and highly prized sort. 25 cts. each, \$2.25 for 10.

Red Jacket. Reddish green; juicy, highly palatable flesh. 40 cts. each, \$3.50 for 10.

GRAPES

Two-year-old plants, 25 cts. each, \$2.25 for 10, except as noted

Brighton. Large bunches; big red berries of excellent flavor; productive and vigorous.

Catawba. Luscious dark red berries; best table quality; late ripening and keeps well.

Concord. The standard Grape. Rich, sweet, juicy fruits; most reliable. 20c. each, \$1.75 for 10.

Delaware. Small, sweet, spicy, delicious berries; compact growth, taking up very little room.

Moore's Early. Like Concord, but two weeks earlier.

Niagara. An extremely fine, sweet, white Grape.

Worden. Large bunches of big, black berries of high quality. Earlier than Concord.

Very Late

Aroma. Widely grown throughout the country as the standard late variety. A sure cropper. Produces quantities of large berries, uniformly round in shape, and deep glossy red in color, having a tough skin and firm flesh, making it an ideal shipper. Unusually mild and sweet and the standard late variety.

Everbearing

Mastodon. Very productive; unusually large size; brilliant, attractive color; and excellent shipping qualities. Produces fruit ninety days from planting. Pick the first crop from July to killing frosts; the second crop the following June; and the third crop from August to killing frosts in late autumn.

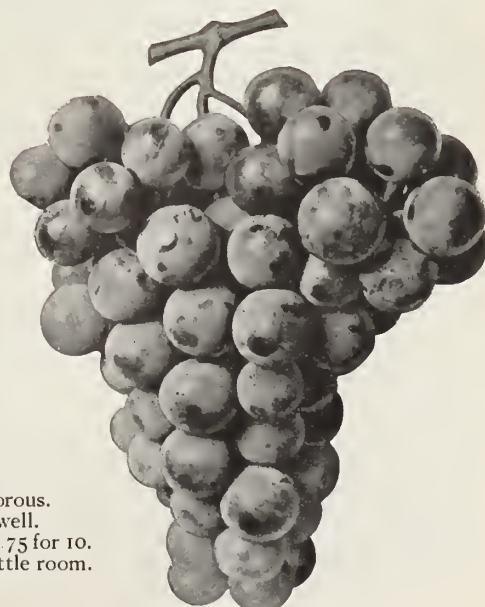
PRICES

	Per 25	Per 50	Per 100	Per 1,000
Premier. Extra-early	\$0 60	\$1 00	\$1 50	\$7 00
Cooper. Second-early	70	1 15	1 80	8 00
Senator Dunlap. Second-early ...	60	1 00	1 40	5 50
Dr. Burrill. Second-early	60	1 00	1 40	5 50
Gibson. Medium late	60	1 00	1 40	6 00
Aroma. Very late	60	1 00	1 50	6 50
Mastodon. Everbearing	1 00	1 80	3 00	17 00

Orders for 500 or more of one variety at the 1,000 rate

At the prices quoted, we pay the postage, except at the 1,000 rate which is f.o.b. nursery.

On orders for 500 plants and upward we recommend express shipment.



Concord Grapes



Harvesting Alfalfa

FIELD SEEDS

The Grains and Grass Seeds we offer are selected with special reference to their purity and germination, and great care is used to have them free from noxious foreign seeds. We handle the very best seeds the market affords, regardless of price.

The Pennsylvania Seed Law requires that every package of field seeds offered for sale, weighing ten pounds or more, shall bear a label or tag giving the percentage of purity, the percentage of weed seeds, the names and number of noxious weed seeds per ounce, and the percentage of germination with the date of test.

Prices

Owing to the frequent changes in the prices of Field Seeds and Grains, we cannot, in fairness to our customers or ourselves, name prices in our Catalogue. Catalogue prices are largely guess-work, and we prefer to have our customers ask us for prices when they are ready to buy, specifying the quantities of the different seeds wanted.

With the prices we will send samples, with purity and germination tests.

Descriptions of Grass Seeds are found on page 47.

CLOVERS

MEDIUM RED. More widely known than any other variety of Clover. Makes a standard Clover for hay purposes, as it can be cut at least twice in the season. Plants grow about 2 feet in height. Sow the seed in the early spring or late summer at the rate of fifteen to twenty pounds to an acre. If used with other seeds, ten pounds to an acre will be sufficient.

MAMMOTH RED. Sometimes called Sapling or English Clover. It is much ranker than the Medium Clover, and yields a much larger crop per acre. It does well on poor soil, is hardy, and usually will stay in the ground longer than Medium Clover. Seed cannot be distinguished from that of Medium Red by its appearance.

ALFALFA. One of the most nutritious plants grown; valuable as a dried hay or for pasture. With proper cultivation it can be grown on some part of almost any farm in Pennsylvania or adjoining states. Two or three cuttings can be made in a season, producing from three to five tons of hay per acre. Ton for ton its feed value equals that of wheat bran. From twelve to fifteen pounds of seed are usually sown to the acre. Some growers sow only ten pounds to the acre. We sell but one grade of Alfalfa seed, the very best northwestern American-grown; also Genuine Certified Grimm.

ALSIKE. One of the best for sowing with Timothy. The seed may be sown in spring, late summer or early autumn, and as the plants are perfectly hardy, the field seldom requires reseeding. The flowers resemble White Clover, but have a red tinge on the edge of the petals and are considerably larger. Thrives better on thin soils than Red Clover. Sow the seed in the early spring or late summer at the rate of eight to ten pounds to an acre.

SWEET. This is a legume whose value today as a soil-improver is much appreciated. It is also used for forage. It is recommended by authorities and farmers everywhere. Will do well in most any soil, but it requires lime and the seed should be inoculated. It may be sown either in the spring or fall. Sow about twenty pounds of seed to an acre. Although a great number of different species are grown in the Old World, we recommend for this climate only the White Blossom Biennial (*Melilotus alba*).

CRIMSON. This Clover is used principally for turning under as a green fertilizer, or for sowing with corn for a winter cover-crop. If desired for feed, the plants should be cut just before they come into bloom. Seed may be sown any time after the first of April at the rate of twenty pounds to the acre. Plants are strictly annual, therefore the field must be reseeded every year. Thrives on poor land and increases fertility of the soil.

WHITE. White Clover is specially valuable for lawn planting and is likewise good for pasturage. Seed can be sown any time in early spring or summer. It is perfectly hardy and very thrifty. Use from ten to twelve pounds to the acre if sown alone; about five pounds to the acre if sown on old sod or with other Clover.

Inoculate all Clover seeds with Stimugerm. See page 75

TIMOTHY

A description of this old familiar hay-making grass is unnecessary here. It is recognized by almost everyone wherever found, and is probably the most extensively grown of all the grasses. It may be sown alone or with Red or Alsike Clover, or with other grasses. From twelve to fifteen pounds of seed are usually sown to the acre.

MISCELLANEOUS FARM SEEDS

Treat seeds of legume crops with Stimugerm and seed-grains with Ceresan. See page 75

SOY BEANS. A valuable plant for bringing nitrogen into the soil. It is also excellent for green or dried fodder, and the seed is very rich in protein, making an excellent dairy feed when balanced with other grains. Seed should be sown during the months of May or June, using at least one bushel to the acre, when sown broadcast, or when sown in drills, $2\frac{1}{2}$ feet apart, about three pecks to the acre. We handle two varieties—**Wilson** and **Manchu**. The Wilson is a well-known variety in Pennsylvania for an early hay crop. It has fine stems, produces abundant foliage, and is also suitable for silage. The Manchu is a goodall-purpose variety. Valuable for forage or hogging down.

COWPEAS. One of the best soil-enrichers, taking the nitrogen from the air and storing it in the soil; valuable also for hay, forage, ensilage or turning under. They should be sown in this latitude in May or June, using, when sown broadcast, one and one-half to two bushels to the acre. Many different varieties are grown in the United States, but the most suitable for sowing in the North are the **Whippoorwill** and **New Era**.

CANADA FIELD PEAS. Used for hay and pasture as well as soil-improvement. Canada Field Peas should be sown as early as possible in the spring, either alone or with oats. When sown broadcast alone, at least two bushels of seed to the acre should be used, or with oats, one and one-half bushels of Peas and one bushel of oats.

DWARF ESSEX RAPE. Especially valuable for feeding sheep, hogs and cattle. Claimed to have a feed value greater than clover. Always used as a pasture and not for hay. Its growth is similar to turnip-tops, but heavier and taller. If seed is sown in May the field should be ready for pasture in July. However, seed may be sown either in early spring, summer or fall. If sown in drills, about five pounds of seed will be required for an acre; if sown broadcast, ten pounds to the acre.

BUCKWHEAT. **Japanese** and **Silver Hull** are the two leading varieties. The Silver Hull produces whiter flour, but the Japanese is more productive. The Silver Hull grows particularly well on poor soil and matures a little later than the Japanese. Seed required, one to one and one-half bushels to the acre.

MILLET. A medium-early forage plant which will grow in almost any climate or soil and produces heavy yields of fodder. The crop should be cut while the plants are in bloom, or at least before the seed forms. Seed may be sown during the month of May or the early part of June at the rate of from thirty to forty pounds to the acre. The Golden variety is considered the better for hay.

WINTER or HAIRY VETCH. One of the best legumes, whether used for a hay crop, pasture, soil-improvement or cover-crop. Thrives on light soils and is very hardy, remaining green throughout the winter. May be sown in the spring or fall, using from sixty to seventy pounds of seed to the acre when sown alone. It is better, however, to furnish a support for the Vetch by sowing rye, barley or oats with it at the rate of one-half bushel of grain and fifty pounds of Vetch to the acre.

SORGHUM or AMBER CANE. Used principally as a summer fodder for cattle. Plants will grow rapidly and at least two crops can be cut each season. If carefully cured it will make an excellent dry fodder. The seed may be sown in drills about 30 inches apart, at the rate of five to six pounds of seed for an acre. If sown broadcast, from seventy-five to one hundred pounds of seed are generally used.

SPELTZ. Resembles wheat but the grain is much larger. Very productive and makes a fine feed for stock whether it is cut green or allowed to ripen and the grain ground. The grain is particularly good for hog- and poultry-feed.

BARLEY. We have the **Oderbrucker** variety. It is a stiff-strawed, six-rowed, bearded Barley, the heaviest yielder that has been introduced, both in grain and straw. Two bushels of seed will be required for an acre.

SUDAN GRASS. Grows very rapidly and is recommended as a substitute for millet for a catch-crop. Attains a height of from 5 to 9 feet and has great drought-resisting qualities. It is strictly an annual and dies each year, like millet. If sown in rows, four to six pounds of seed per acre is recommended or broadcast sixteen to twenty-four pounds per acre.

WINTER WHEAT. We can supply the leading sorts of Winter Wheat. Our stock usually consists of **Leaps Prolific**, **Pennsylvania 44**, **Forward**, and **Klondyke**. Write us for samples and prices before seeding time.

SPRING WHEAT. If your winter wheat happens to be killed by extreme cold weather, you can still secure a crop by sowing Spring Wheat in early spring. **Marquis** is the leading variety sown in Pennsylvania.

WINTER RYE. Usually sown as a cover-crop, getting the seed into the ground before the middle of November. About one and one-half bushels of seed will be required for an acre.

SPRING RYE. Matures early and makes an excellent green food when cut, or will supply pasturage for several weeks. Distinct from the winter sorts, as these seeds are smaller.

OATS

VICTORY. A branching or tree Oats, having a white grain, with fairly thin hull. The straw is medium fine, very strong, and stands a great deal of bad weather before lodging. It ripens early and is an enormous yielder.

PATTERSON. An old and well-established variety originated by Pennsylvania State College. Medium early, with rather small, light yellow grains. The straw is fairly long but only medium stiff. A heavy yielder.

CORNELLIAN. A branching or tree-shaped variety. The kernels are long, rather slender, with very thin hulls. The grains do not make a very attractive appearance, but on account of the thin hulls it has excellent feeding quality. A remarkably heavy-yielding variety of high quality Oats for feeding.

STORM KING. A side Oats that has been grown successfully for some years. It derives its name, Storm King, from the strength of the straw, which often measures from $4\frac{1}{2}$ to $5\frac{1}{2}$ feet in height. It will stand the most severe winds without lodging. Heads long, containing an unusually large number of grains; yields from 70 to 100 bushels to the acre.

SWEDISH SELECT. This variety is too well known to require a lengthy description here. The quality of the grain is unsurpassed. Very thick kernel and thin shuck. Does not have a long beard like common Oats. The straw grows to a medium height, is very stiff, and consequently seldom lodges. It has proved to be a wonderful yielder.



Victory Oats

FIELD CORN

We have always made a specialty of Seed Corn, supplying our trade with only those varieties that experience has proved are most suitable for the climate of Pennsylvania, Ohio, and West Virginia. Our Seed Corn is carefully hand-picked and tipped and butted before it is shelled. We aim to have every variety true to name and of high germination.

GOLDEN SURPRISE. An old-time variety maturing in 90 to 95 days. Because of quality, yield, and color, Golden Surprise is one of our most popular Corns. Ears are good size, with 14 to 18 rows of long, light orange kernels. A crackerjack good Corn for the crib, and has a host of friends.

SURE-CROP. The tremendous quantity of shelled Corn this variety produces to the acre surprises everyone who grows it. Generally there are two good ears to a stalk. The grain is very long—longer than any other—and the cob very thin. Sure-Crop has a rich, deep yellow grain, making it much desired by millers. The fodder grows from 8 to 10 feet high. It is an early Corn, ripening in 90 to 100 days.

EARLY ORANGE YELLOW DENT. A 90-day Corn that is almost a giant, stalks ranging from 8 to 11 feet high. The ears are 8 to 10 inches long, with 16 rows on a red cob. One of the earliest maturing and prettiest yellow Dents in cultivation, which has made a reputation for yield and quality.

PRIDE OF THE NORTH. A Yellow Dent variety, maturing in 90 days. Ears 8 to 10 inches long, sixteen rows on the ear, cob small, grain above medium size and closely set. One of the hardiest, and especially adapted to the northern planter; will mature farther north than any other Dent Corn.

PATTON'S IMPROVED LEAMING. Our stock of this variety has been grown in Lawrence County, Pennsylvania, for nearly fifty years and has become well acclimated in western Pennsylvania. It produces a good-sized ear, with deep, broad grains that contain a large germ, and shoots out a large, vigorous sprout that makes a strong, quick growth at the start. Grows a very leafy fodder, making it one of the best varieties for silage. In a good season, Patton's Improved Leaming has yielded as high as 75 bushels of shelled Corn per acre. It matures in from 90 to 100 days.

WHITE-CAP YELLOW DENT. An early sort which grows well on light soil; grain is yellow with white tip. Nearly as early as Pride of the North, maturing in from 90 to 95 days. Ears from 8 to 10 inches long, well filled, with sixteen or eighteen rows.

ENSILAGE CORN

SWEEPSTAKES PEDIGREE. This is not a variety, but a high-class hybrid sold under this trade name. It produces from 15 to 20 tons per acre of the highest quality ensilage. Crops of 25 to 35 tons of well-developed ears and stalks, grown from plantings made from May 25 to June 12, have been reported to the producers for the past ten years in many states. It also makes high quality Corn for cribbing, and 180 to 240 bushels of ears of husked Corn have been produced several times. Do not plant more than 1 bushel of seed on 3 acres; better to do it on 4 acres. Plant rows not less than 3½ feet apart, and drill kernels 10 to 16 inches apart in the row.

EUREKA. (Virginia-grown.) The Eureka is a Virginia-bred Corn and originated a number of years ago on the rich bottom of the James River Valley where it grows to perfection, often attaining a height of 16 to 18 feet. It is a vigorous grower, large stalks, with unusually heavy foliage, and produces from one to three ears to the stalk, according to the land. The ears average about 11 inches in length. Will produce more tons of ensilage to the acre than any other variety.

BLUE MOUNTAIN. This Corn is grown at a high altitude in the Blue Ridge Mountains in Virginia, and makes an ideal ensilage Corn. Grows to a mammoth size, full of leaves, and has a big ear. It is a vigorous-growing Corn, often knee-high after 30 days from planting, and grows 14 to 16 feet high. Our seed is selected in the fall, properly taken care of, and always shows nearly a perfect germination test.

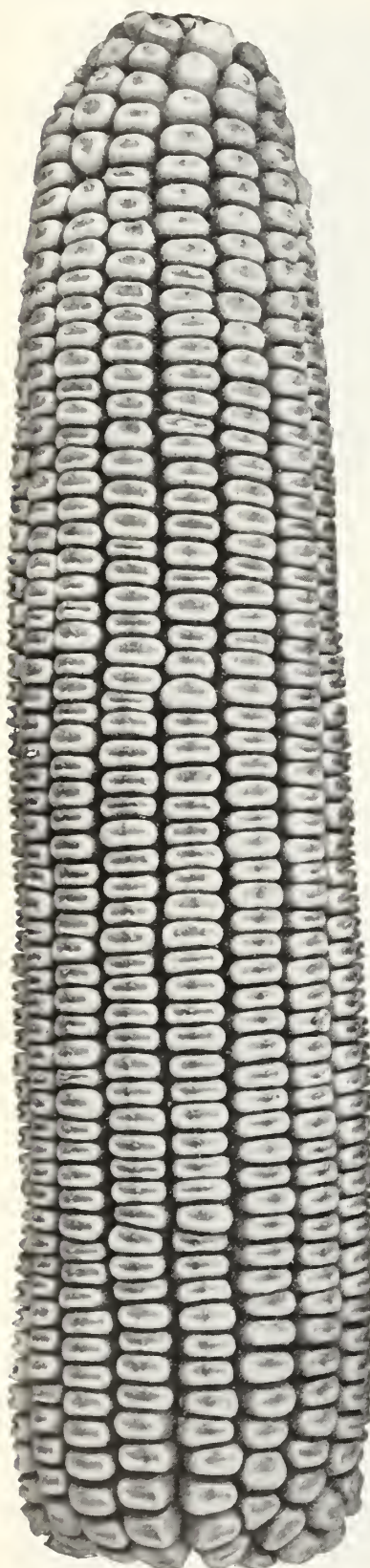
LANCASTER COUNTY SURE-CROP. Lancaster County Sure-Crop holds first place in the estimation of many leading farmers. It is a yellow Corn, ears are very long and not proportionately thick. It grows quite tall, is very leafy and develops ears early. Some farmers claim that for husking purposes it is just as valuable a variety as it is for ensilage.

VIRGINIA HORSE-TOOTH. The popular fodder Corn of the Southern States; from 12 to 14 feet high, and stiff enough to stand up during severe storms. The seed is white, broad, and deep, with white cob.

RED-COB. A tall-growing plant, with a quantity of side leaves, making it desirable for ensilage. A favorite with a great many growers. The grain is narrow and clear white.

Our aim has always been to furnish High-Quality Seeds rather than to sell inferior seeds at low prices.

Write us for special prices and samples of Field Seeds and Grains. Specify quantities wanted



Golden Surprise Corn

SEED POTATOES

NORTHERN-GROWN CERTIFIED SEED

For many years we have made a specialty of supplying our trade with northern-grown Seed Potatoes. Our stock is especially grown for seed, by experienced growers in the cold North and Northwest, and is Certified Stock, U. S. Standard No. 1, high quality, true to type and free from disease.

We begin shipping Seed Potatoes as early in the spring as weather conditions will permit, usually the latter part of March. However, we urge our customers to place their orders early, while our stock of all varieties is complete, as it frequently happens that we are unable to supply certain varieties late in the season. Owing to the perishable nature of Seed Potatoes the market is subject to radical changes, and it is impossible for us to quote prices at the time our Catalogue goes to press. If Price-list is not enclosed with Catalogue, write for prices, stating quantity and variety wanted.

There is no crop so much benefited by the introduction of fresh, new seed as the Potato. ORDER EARLY WHILE OUR STOCKS ARE COMPLETE



Russet Potatoes

EARLY VARIETIES

EARLY SIX WEEKS. (Certified.) A very early Potato, somewhat resembling the Early Ohio.

EARLY ROSE. (Certified.) This is genuine stock of the old standard Early Rose Potato. Although one of the earliest varieties it still retains its popularity.

EARLY OHIO. (Certified.) A sort that is well known by market-gardeners who are after a first-early Potato for home trade; the tubers are almost round, with pink skin and of excellent quality.

IRISH COBBLER. (Certified.) An extra-early, round, white Potato. Vines yield heavily and the tubers are of extremely fine quality. An excellent all-round variety, either for the home-garden or growing commercially. About a week to ten days later than Early Ohio.

Price-list of Seed Potatoes furnished upon request

Treat Seed Potatoes with Du Bay Semesan Bel
See page 75

Irish Cobbler Potatoes



LATE VARIETIES

HIRUCO No. 9. (Certified.) Grown from Hiruco stock seed, direct from originators. This smooth-skinned Rural type Potato was produced from a seed-ball in 1905. Since its inception it has been widely distributed among particular growers and in the latter years has been cultivated in New York State by more growers entering their crops for inspection than has any other one variety. In 1919 the originators selected this variety on which to do special work for their leader, believing it to have the greatest combination of good points of any Rural type Potato. This variety has always excelled in its eating quality, heavy-yielding ability, shallow and well-placed eyes, the latter making it cut to much better advantage for seed than do many of the other well-known varieties. The extensive selection has increased the setting ability and freed this source of the diseases which are so common. Its smooth white skin makes it have a beautiful appearance and therefore satisfies a wider range of markets than a rougher skinned tuber.

RUSSET. (Certified.) It is an exceptionally heavy yielder, table quality of the very best, and with smooth, velvety, russet skin and shallow eyes. No Potato can surpass it in uniform and handsome appearance. It is very fine-grained, cooks as white as flour, and is of splendid flavor; an excellent keeper and retains its good eating qualities until late in the spring. It is one of the hardest varieties known. Its great productiveness, handsome color and resistance to diseases make it a very popular Potato and one especially suited to our locality.

CARMAN No. 3. (Certified.) Extra large, oblong, slightly flat, white. Vines are extra-good growers and yield an immense quantity of tubers of uniform size. One of the best late varieties; of excellent quality; good keeper.

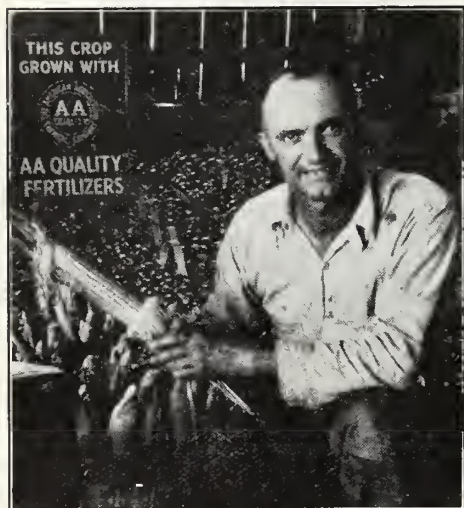
SIR WALTER RALEIGH. (Certified.) The tubers vary from round to oblong in shape, uniformly of good size, white-skinned and of excellent quality. A good keeper, and, like Carman No. 3, a very heavy yielder.

Price-list of Seed Potatoes furnished upon request

Fertilizer. We recommend Agrico or E. Frank Coe's Columbian Fertilizer as excellent for Potatoes. See page 71 for prices.

Potato Machinery. If you are interested in Potato Machinery, write for special catalogue giving detailed descriptions of Potato Planters, Diggers, and Sprayers.

Earlier Maturity and Top Prices with "AA QUALITY" Fertilizer



Mr. Joe Vettori, Library, Pa., showing high-quality sweet corn that brought \$1.50 extra price on the market due to early maturity.

No trouble marketing early-maturing crops

"This year, using 350 pounds "AA Quality" Fertilizer per acre, I got 400 bushels of sweet corn on the market two weeks earlier than the average," writes Joseph Vettori, Library, Pa. "I received \$2.75 per bushel for it, which was \$1.50 per bushel more than the crop brought later in the season. For 14 years I have been using "AA Quality" Fertilizers and have tried other brands, too. I find your goods are far better in getting the crops on the market earlier and increasing yields and profit. "AA Quality" Fertilizer pays the best."

Growers! Better read that statement again. You know the value of early-maturing crops. They bring the top prices and extra profits. This extra price resulting from early maturity may mean the difference between profit and loss. Especially in seasons of low prices.

Grows Good Crops, Even on Poor Land!

Near Neville Station, Pittsburgh, Pa., Archie Hamilton is another well-known grower who feels the same about "AA Quality" Fertilizers. He writes: "The land that we are farming has been cropped with vegetables every year, and

we must use fertilizer. Even on poor land we have raised good crops with "AA Quality" Fertilizers. I can always see a big difference where we use your goods. Our sweet corn crop matured two weeks earlier this season, and we credit this to a liberal use of your goods. "AA Quality" makes money for us."

These growers, as well as hundreds of others in western Pennsylvania, know that "AA Quality" and Agrico Fertilizers are better. This year, try Agrico on part of your crops. Compare the difference. See for yourself how Agrico produces bigger yields, better quality, early maturity, and more profitable crops.

There's a Reason

Agrico contains extra plant-foods. Agrico brings to the crop new, important health-giving elements that have long been needed. Agrico is an improvement in fertilizers. It contains the usual amounts of the old standby plant-foods, nitrogen, phosphorus, and potash, and, in addition, it contains other plant-foods that mean extra crop-producing power. Get the most out of the money you invest by using Agrico and get the most efficient combination of crop-producing plant-foods available. Remember there is a brand of Agrico for each crop.

For the Home-Gardener

We now offer and recommend Agrico for truck, which is available in 50- and 25-pound bags. See the following page for prices.



Mr. Archie Hamilton, of Neville Station, Pittsburgh, Pa., grows the kind of crops shown above on poor land with "AA Quality" Fertilizers.



MANUFACTURED ONLY BY

The American Agricultural Chemical Co.

Makers of AGRICO and E. Frank Coe's "AA QUALITY" Fertilizers

"AA" QUALITY FERTILIZERS

E. Frank Coe's Brands

RED SEAL (5-10-5)

In 125-lb. bags

125 lbs. \$3 15	1,000 lbs. ... \$19 00
500 lbs. 10 00	2,000 lbs. ... 36 00

RED BRAND (4-8-7)

In 125-lb. bags

125 lbs. \$3 00	1,000 lbs. ... \$18 50
500 lbs. 9 75	2,000 lbs. ... 35 00

GOLD BRAND (3-12-6)

In 125-lb. bags

125 lbs. \$3 00	1,000 lbs. ... \$18 00
500 lbs. 9 50	2,000 lbs. ... 34 00

COLUMBIAN (2-8-5)

In 125-lb. bags

125 lbs. \$2 75	1,000 lbs. ... \$16 00
500 lbs. 8 50	2,000 lbs. ... 30 00

Agrico Brands

Agrico represents the best combination of plant-food for each crop that experience and science have so far produced. Each grade is compounded and blended to provide, with the highest degree of efficiency, all the essential plant-foods for each crop.

AGRICO FOR TOMATOES (3-12-6)

In 125-lb. bags

125 lbs. \$3 20	1,000 lbs. ... \$19 50
500 lbs. 10 25	2,000 lbs. ... 36 50

AGRICO FOR TRUCK (5-10-5)

In 25-lb., 50-lb., and 125-lb. bags

25 lbs. \$0 90	500 lbs. ... \$10 50
50 lbs. 1 65	1,000 lbs. ... 20 00
125 lbs. 3 25	2,000 lbs. ... 38 00

AGRICO FOR CORN (3-12-6)

In 125-lb. bags

125 lbs. \$3 20	1,000 lbs. ... \$19 50
500 lbs. 10 25	2,000 lbs. ... 36 50

AGRICO FOR POTATOES (4-8-7)

In 125-lb. bags

125 lbs. \$3 20	1,000 lbs. ... \$19 50
500 lbs. 10 25	2,000 lbs. ... 37 00

AGRICO FOR GRAIN (2-12-4)

In 125-lb. bags

125 lbs. \$2 95	1,000 lbs. ... \$17 50
500 lbs. 9 25	2,000 lbs. ... 33 00

AGRICO FOR PASTURES AND TOP DRESSING (7-6-6)

In 125-lb. bags

125 lbs. \$3 50	1,000 lbs. ... \$22 00
500 lbs. 11 50	2,000 lbs. ... 42 00

AGRICO FOR TREES AND SHRUBS

In 25-lb. and 100-lb. bags

25 lbs. \$1 25	500 lbs. ... \$14 50
100 lbs. 3 00	1,000 lbs. ... 28 00

Special Prices on Fertilizers

On orders for ton and half-ton lots for shipment on arrival of cars in February and March, a reduction of \$2 per ton will be allowed. Orders must be in by March 15, to secure this special reduction.

This reduction also applies to Sheep Manure on next page.

16 Per Cent Superphosphate

In 125-lb. bags

125 lbs. \$2 25	1,000 lbs. ... \$12 00
500 lbs. 6 50	2,000 lbs. ... 21 00

20 Per Cent Superphosphate

In 125-lb. bags

10 lbs. \$0 50	50 lbs. \$1 50
25 lbs. 1 00	

In 125-lb. bags

125 lbs. \$2 50	1,000 lbs. ... \$13 50
500 lbs. 7 25	2,000 lbs. ... 24 50

Lawn and Garden Bone-Meal

Especially adapted for lawns, gardens, and greenhouses. Ground very fine.

Nitrogen, 2.47 per cent; total Phosphoric Acid, 22.88 per cent.

Postpaid

4 lbs. \$0 25	\$0 40
9 lbs. 50	70
25 lbs. 1 10	1 45
50 lbs. 1 90	2 50

In 100-lb. bags

100 lbs. \$2 85	1,000 lbs. ... \$22 50
500 lbs. 11 75	2,000 lbs. ... 43 00

Pure Raw Bone Meal

Used for the same purpose as Lawn and Garden Bone-Meal, but not so quick in action.

Nitrogen, 3.70 per cent; total Phosphoric Acid, 21.50 per cent.

In 100-lb. bags

100 lbs. \$3 25	1,000 lbs. ... \$25 50
500 lbs. 13 25	2,000 lbs. ... 48 50

Nitrate of Soda

Fifteen per cent nitrogen, equivalent to over 18 per cent ammonia. 1 lb. 15 cts., 5 lbs. 50 cts., 10 lbs. 75 cts., 50 lbs. \$2.25.

In 100-lb. bags

100 lbs. \$3 50	1,000 lbs. ... \$29 50
500 lbs. 15 25	2,000 lbs. ... 56 50

"A A C" Sulphate of Ammonia

24.5 per cent Ammonia

In 200-lb. bags

200 lbs. \$5 70	1,000 lbs. ... \$25 00
600 lbs. 15 60	2,000 lbs. ... 47 00

See page 73 for prices on smaller quantities

Muriate of Potash

Imported, guaranteed 48 per cent K₂O. 1 lb. 15 cts., ppd. 25 cts.; 5 lbs. 60 cts., ppd. 75c.; 10 lbs. \$1, ppd. \$1.20; 100 lbs. \$3.75.

In 200-lb. bags

200 lbs. \$6 50	1,000 lbs. ... \$29 00
600 lbs. 18 00	2,000 lbs. ... 55 00

Clay's Fertilizer

A well-known English fertilizer used principally on plants grown for exhibition.

Postpaid

7-lb. bag.	\$1 35	\$1 55
14-lb. bag.	2 25	2 50
28-lb. bag.	4 00	4 40
56-lb. bag.	7 00	7 65
112-lb. bag.	12 00	

Aluminum Sulphate

Experiments have shown that soil acidity is required for rhododendrons, azaleas and all other evergreens. Apply at the rate of about one-half pound per square yard.

1 lb. \$0 10	10 lbs. \$0 75
5 lbs. 40	25 lbs. 1 50

Leaf-Mold

Used principally for mixing with potting soil. ½ pk. 30 cts.; pk. 50 cts.; sack (about 2½ bus.) \$2.50; 5 sacks \$11.25.

Unleached Hardwood Ashes

A proper and liberal use of good Hardwood Ashes will restore worn-out lands to prime fertility, preserve grass lands through severe drought, and give trees, plants and vines renewed vigor.

5 lbs. \$0 25	500 lbs. ... \$11 00
25 lbs. 90	1,000 lbs. ... 21 00
100 lbs. 2 75	2,000 lbs. ... 40 00

Agricultural Gypsum

Agricultural Gypsum (land plaster) is an untreated, ground, natural rock fertilizer, consisting mainly of hydrated calcium sulphate. It therefore bears two essential plant-foods, calcium and sulphur. It is also used as a carrier of insecticides, such as paris green, calcium arsenate, etc.

Put up in 80-lb. paper bags

10 lbs. \$0 25	480 lbs. ... \$5 25
25 lbs. 50	960 lbs. ... 9 50
80 lbs. 1 00	2,000 lbs. ... 18 00

Ask for booklet, "How and Why of Gypsum"

Bald Eagle Hydrated Lime

Prepared especially for vegetable-gardens, lawns, greenhouses, whitewash, and kindred uses, besides all the various other purposes for which Lime is essential. It corrects the sour condition which exists in many soils, especially those shaded by houses or trees. About 1 pound of Bald Eagle to each 30 square feet of garden ground or lawn is sufficient to sweeten the soil.

10-lb. bag. ... \$0 25	500 lbs. ... \$5 00
50-lb. bag. ... 60	1,000 lbs. ... 8 50
100 lbs. 1 10	2,000 lbs. ... 15 00

Ask for delivered prices in carload lots

American Agricultural Limestone

Pure ground limestone, artificially dried and very finely pulverized.

80-lb. bag. ... \$0 90	960 lbs. ... \$6 25
480 lbs. 3 85	2,000 lbs. ... 11 00

Sheep Manure



Wizard makes big crops

Wizard Brand Cow or Cattle Manure

Wizard Brand Cattle Manure is made from selected crude manures accumulating in the brick-paved pens of the stock-yards at Chicago. These crude manures, free of excess straw and rubbish, are concentrated by a direct heat-process to kill weed seeds.

Cattle or Cow Manure is a safe, slow-acting plant-food, preferred for roses, ferns, palms, and such plants as are sensitive to the quick-acting chemical fertilizers. Wizard Cattle Manure is safe for all plants.

Cattle Manure is also best for binding loose, sandy soils and for mixing with bench and potting soils.

Nature's Plant Food

Sterilized and Absolutely Weedless

For Lawns and Gardens

There are no safer or more dependable plant-foods than Wizard Sheep and Cow Manures. They are pure manures, highly concentrated and sterilized so as to kill all weed seeds. These natural fertilizers are safe and will not burn plants. Everybody can get wonderful results with Wizard Brand Manures because they supply the humus and natural plant-food so necessary to make all soils rich and fertile. Try Wizard this year on your lawn and garden and see how quickly and economically these soil-building fertilizers put new life and beauty into your plants.

A Practical, Economical Fertilizer for Shrubs, Fruits and Vegetables

LAWNS. Wizard produces a thick, velvety green lawn of lasting beauty. In making new lawns, broadcast 10 pounds to 100 square feet and rake into the surface soil. On old lawns use 6 to 10 pounds per 100 square feet. Use Wizard this year and watch the new beauty it will develop.

FLOWERS AND SHRUBS. Luxuriant green foliage and a wealth of vivid-colored flowers quickly follow the use of Wizard. Use sheep-manure on annuals, shrubs, and quick-growing perennials. Cattle manure is preferred for roses, ferns, and the tender perennials. Top-dress established plants at rate of 10 pounds to 100 square feet, and rake into the soil. Use from 1 to 5 pounds for shrubs, vines, and trees, according to size.

VEGETABLES AND FRUITS. Every successful gardener knows that nothing equals manure for producing big crops of crisp, tender vegetables. Wizard also improves yield, color, and flavor of fruits. It drills freely and is a practical soil-building fertilizer for field-crops. Use 500 to 1,000 pounds per acre.

FLORISTS. Wizard Sheep and Cow Manures are unexcelled for feeding plants under glass. They are weedless, safe, and contain no chemicals or fillers of any kind. Get results by using Wizard Manures.

	Postpaid		
2 lbs.....	\$0 15	\$0 25	50 lbs.....\$1 50
5 lbs.....	25	40	100 lbs..... 2 50
10 lbs.....	45	65	500 lbs.....10 75
25 lbs.....	90	1 25	1,000 lbs.....20 50
			2,000 lbs.....\$39 00

Cattle Manure, in 25-lb., 50-lb. and 100-lb. bags, same price as Sheep Manure
Prices are f.o.b. cars Pittsburgh. City delivery, 50 cts. per 100 lbs. extra
Prices in carload lots quoted on request

NITROPHOSKA

15-30-15

Nitrophoska—the concentrated complete fertilizer—contains all of the three essential plant-foods: 15% nitrogen, 30% phosphoric acid and 15% potash. A 100-lb. bag of Nitrophoska contains 60 pounds of actual available plant-food. Excellent for lawns and gardens. Early spring application produces strong, vigorous growth of rich green color. A 10-pound package is enough for 1,000 square feet.

Postpaid			Postpaid		
1-lb. pkg.	\$0 25	\$0 35	25-lb. pkg.	\$2 75	\$3 10
5-lb. pkg.	90	1 05	50-lb. bag.	4 75	
10-lb. pkg.	1 50	1 70	100-lb. bag.	8 50	

FLORANID

(UREA)

Floranid is a very rich nitrogen fertilizer (46% nitrogen) used principally during the growing season to obtain more rapid growth, richer color of foliage, and greater brilliancy of bloom. The nitrogen is in the same chemical organic form as in liquid manure. A 5-pound package is enough for five monthly applications to 1,000 square feet.

Postpaid			Postpaid		
1-lb. pkg.	\$0 25	\$0 35	25-lb. pkg.	\$2 75	\$3 10
5-lb. pkg.	90	1 05	50-lb. bag.	4 75	
10-lb. pkg.	1 50	1 70	100-lb. bag.	9 00	



Kopper's Sulphate of Ammonia

Unrivalled for stimulating early, vigorous growth. Especially recommended as a nitrogenous fertilizer for the lawn, home-garden, shrubs, trees, house-plants, and flower-beds. Contains 25¼% Ammonia (20.75% readily available nitrogen)—not easily leached from the soil. Clean, odorless, absolutely free from weed seeds. Will not injure hands or clothing. Never lumps or cakes. Comes to you fine and dry like sea-sand—and stays that way. "Feeds the grass and starves the weeds" by preventing over-alkalinity of the soil. Easy and economical to use.

Postpaid			Postpaid		
26-oz. carton	\$0 25	\$0 35	25-lb. bag.	\$2 25	\$2 60
5-lb. canister	60	75	50-lb. bag.	3 50	
10-lb. bag.	1 15	1 35	100-lb. bag.	5 00	

JAX

TRIPLE STRENGTH PLANT FOOD

**GIVES FASTER,
STURDIER GROWTH
GOES THREE TIMES AS FAR**

Jax dissolves like sugar and carries balanced, liquid nourishment right to the roots, causing deep-rooted, vigorous, disease-resisting plants. It is clean, odorless, dustless, and economical—1 pound (richer than 40 pounds of manure) nourishes 200 square feet. Can be applied dry like any other fertilizer, but is much more conveniently and economically applied in liquid form with the Jaxometer. Use in early spring, late spring, or early fall. Full directions with each package. Costs less per pound of plant-food. **Jax Tabs**, for potted plants, 25 cts. postpaid.

Postpaid			Postpaid		
1-lb. carton	\$0 45	\$0 55	25-lb. sack	\$5 00	\$5 35
5-lb. canister	1 50	1 65	100-lb. sack	17 50	
			Jaxometer	3 75	4 00

Agrico for Lawns

This rich plant-food helps produce luxuriant lawns and blooming flowers in record time. Agrico is a complete food for grass, fruits, flowers, and vegetables. It is easily and quickly applied. It is clean, dry, and odorless. Just sift over your lawn, or sprinkle around your trees and shrubs, then wet down, and the application is completed. Lawns require from 2½ to 5 pounds per 100 square feet; flower- and vegetable-gardens, from 45 to 50 pounds per 1,000 square feet.



Postpaid			Postpaid		
5-lb. can.	\$0 50	\$0 60	25-lb. bag.	1 75	2 10
10-lb. can.	85	1 05	50-lb. bag.	3 00	
25-lb. bag.	1 75	2 10	100-lb. bag.	5 00	

Lōma

**Beautifies Lawns, Vegetable-Gardens, Flowers,
Potted Plants, Fruit and Shade Trees**

Here is a concentrated, high-quality plant-food, rich in the elements vital to plant-life—nitrates, phosphates, and potash, as well as other plant nourishment. All the food-elements that lawns and gardens need, combined and processed to make them quickly and fully available.



Demonstrations by gardening enthusiasts and leading growers of the country have led thousands of home-owners throughout the country to prove for themselves the power of Lōma.

Everywhere the results are the same. In less than two weeks' time, grass treated with Lōma is noticeably taller, thicker, greener. Lōma produces bigger and juicier vegetables, larger and brighter blooming flowers.

Lōma is odorless, clean, many times more powerful than barnyard manures, and entirely free from weed seeds. So easy to apply, too. It is sown like grass seed—then wet down. That's all there is to it.

Postpaid			Postpaid		
100-lb. sack.	\$0 25	\$0 35	25-lb. bag.	\$1 75	\$2 10
1-lb. can	50	65	50-lb. bag	3 00	
5-lb. can	85	1 05	100-lb. bag.	5 00	

VIGORO

Specially prepared plant food

**ALL PLANT-LIFE
MUST BE FED**

For Lawns, Gardens, Flowers, Shrubbery, Trees

Plants, like human beings, must receive the right nourishment. Vigoro is specially prepared to supply lawns, gardens, flowers, shrubbery, and trees with all of the plant-food elements needed for rapid, sturdy, and luxuriant growth.

Vigoro is clean, odorless, and easy to apply. It can be sown by hand, like grass seed.

Start right this year by using hardy, disease-free seeds and Vigoro. Your success in gardening will be assured. Complete directions in every bag.

Postpaid			Postpaid		
12-oz. pkg.	\$0 10	\$0 20	25-lb. bag.	1 75	2 10
5-lb. pkg.	50	65	50-lb. bag.	3 00	
25-lb. bag.	1 75	2 10	100-lb. bag.	5 00	
50-lb. bag.	3 00		500 lbs.	24 00	

Old Gardener

Old Gardener is a complete Fertilizer, scientifically balanced, containing all the elements needed for strong, healthy plant-growth. Especially prepared for lawns and ornamental plantings of all kinds. Regular applications of Old Gardener on lawns is most effective in eliminating weeds.

Use 2 pounds per 100 square feet on old lawns. Double this amount for new lawns, flowers, vegetable-gardens, etc.



It is clean and odorless—a little goes a long way.

Postpaid			Postpaid		
5-lb. bag.	\$0 50	\$0 65	25-lb. bag.	1 75	2 10
10-lb. bag.	85	1 05	50-lb. bag.	2 90	
25-lb. bag.	1 75	2 10	100-lb. bag.	4 85	

**For a quality fertilizer for the home vegetable garden,
we recommend Agrico for Truck. See page 71 for prices.**

PIONEER PEAT MOSS

For Better Lawns and Gardens Use G P M

Clean, Odorless, Pleasant to Work with and Free
from Weed Seed



Pioneer GPM Peat Moss is preferred by hundreds of professional florists and nurserymen, for they know through experience that it is the finest substitute soil-medium that money can buy. GPM Peat Moss, the Pioneer Garden Peat Moss in all America, has made the progress you would expect of the pioneer in any field. It will prepare any soil for garden purposes and will improve the best garden soil, both physically and in fertility. Pioneer GPM Peat Moss rebuilds wornout soil, maintains and improves fertility, and assists in the liberation of the soil's nitrogen content. In fact, it is the most economical and satisfactory granulated Peat Moss that you can buy at any price. Why accept an unknown substitute? An advertised brand is trustworthy. "Just as good" denotes an anxiety to sell something not as prominent or as acceptable as GPM. When you order Peat Moss, ask for GPM and look for the triangular trade-mark when you buy.

This material is light and dry, vegetation which has been decomposing for years. Its use is a quick way to add humus to the soil. Makes heavy soil light, friable, giving better drainage. Makes light soil more retentive of moisture. Increases the action of necessary, beneficial soil bacteria. Turn under liberal quantities.

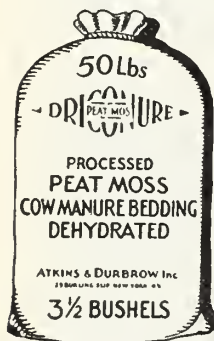
Useful for mulching in the flower- and vegetable-garden. Invaluable for Rhododendrons, Kalmias, Ferns, Evergreens, Blueberries. For lawns, sprinkle over the lawn several times during the season, giving a heavy coating for winter. The perfect mulch for roses. Used and recommended by leading rosarians.

A good summer mulch, as it conserves moisture and prevents soil from baking and crusting. As a winter mulch, it insulates soil against frequent freezing and thawing effects.

Carton, containing nearly 2 bushels loose Peat Moss, for small gardens, house plants, etc., \$1.50; postpaid \$1.60.

Large, compressed bales of 20 bushels loose Peat Moss, sufficient to cover 250 to 300 square feet, 1 inch deep, \$2.75; 5-bale lots, \$2.65 per bale f.o.b. Pittsburgh. City delivery 50 cts. per bale extra.

Ask for booklet on Peat Moss



A New True Organic Fertilizer

Nature's Own Fertilizer

The kind of Fertilizer that will keep your garden healthy and beautiful throughout the year—a peat-moss cow-manure bedding, dehydrated and free of weed seeds; purely organic, it contains all the vitalizing elements of fresh cow manure and peat moss in readily available form.

Nitrogen for foliage and growth.

Phosphoric acid for stimulating flowering, fruiting, and root growth.

Potash for building healthy tissues, giving body and intensified color.

More, it holds these life-giving elements until used—will not permit them to leach away. The result is a Fertilizer that gives life to your plants over a period of years, and continues to build up the soil at the same time. Try Driconure and you will find it the best tonic your plants and lawn could use. In 50-lb. bags. 50 lbs. \$2.50, 250 lbs. \$12, 500 lbs. \$23, 1,000 lbs. \$44, 2,000 lbs. \$84.

STIM-U-PLANT

Stim-U-plant is an odorless, highly concentrated plant-food, in tablet form, for garden and house plants. Stim-U-plant is easy to use. Simply insert tablets in soil about 3 inches from stem of plant, or dissolve in water at the rate of four tablets to the gallon and apply as liquid manure. Complete directions with every package.

Prices, postpaid: 10 tablets 15 cts., 30 tablets 25 cts., 100 tablets 75 cts., 1,000 tablets \$3.50.



The only plant-food tablets containing Manganese, now so highly recommended by the U. S. Department of Agriculture, in addition to

Nitrogen, Phosphoric Acid, and Potash. Best for indoor plants, window-boxes, and garden flowers, especially roses. Clean, convenient, no odor, no waste. Also used as liquid fertilizer.

Prices, postpaid: 30 tablets 25 cts., 75 tablets 50 cts., 200 tablets \$1, 1,000 tablets \$3.50. The larger sizes are quite economical.



NACO

"A GOLF COURSE FERTILIZER"

A complete all-organic grass-food Fertilizer, the result of innumerable experiments in turf-culture. Naco, a

product of nature, contains elements not usually found in chemical Fertilizers, such as magnesium and iron and other rare elements in compounds which are broken up by the bacterial action of the soil-organisms. Naco contains no weed or other seeds but is not sterile, for it contains millions of beneficial bacteria that are continually at work in the soil, breaking down the different compounds of plant-food into elements which can be taken up by the grasses as plant-food.

In 100-lb. bags

100 lbs.....\$4 00	1,000 lbs.....\$34 00
500 lbs.....17 50	2,000 lbs.....65 50

Circular on request

AA Country Club Fertilizer (8-6-4)

This fertilizer is carefully balanced to meet the most exacting needs of grass. It is especially suited to golf course or lawn.

In 100-lb. bags

100 lbs.....\$3 60	1,000 lbs.....\$30 00
500 lbs.....15 50	2,000 lbs.....58 00

ADCO

FOR MAKING ARTIFICIAL MANURE

Good gardening depends on manure—chemicals, prepared fertilizers, nothing can take its place. You *must* have manure.

Adco is the powder that when mixed with straw, stalks, leaves, cuttings, garden waste of any kind, turns it into manure. This Adco Manure is *real* manure, identical chemically and in fertilizing power with the old-fashioned kind, but much cleaner.

25-lb. bag (enough for 12 wheelbarrow loads of garden waste, making ½ ton of manure), \$2; postpaid \$2.35.

150-lb. bag (enough for a heap 10 x 10 x 6 ft., making about 3 tons of manure), \$10.50.

Each package is accompanied by full, explicit directions. The process is so simple that mistake or failure is almost impossible.

INCREASE your FARM PROFITS and GARDEN PRODUCTS

By Preventing Seed-Borne Disease-Losses with Du Bay Disinfectants

Regardless of the care taken in the preparation of the seed-bed and the selection of the seed, field-crop and garden failures may result from attacks of seed-borne diseases. These losses and disappointments may easily and inexpensively be avoided by disinfection of the seed, before planting, with Du Bay Seed Disinfectants. Treat all seeds before planting with the proper Du Bay Seed Disinfectant.

Semesan—for flower and vegetable seeds

Diseases carried on the seed often reduce germination and cause a poor stand, lowered quality, and unsatisfactory yields. Destroy these disease organisms without injuring the seed by treating your seeds, bulbs, roots, corms, and tubers with Semesan. Easily and quickly applied as a dust or liquid. Effective in controlling damping-off of seedlings. One ounce treats 15 to 30 pounds of seed at a cost of $\frac{1}{4}$ to 1 cent a pound.

Prices: 2-oz. tin 50 cts., 1-lb. tin \$2.75, 5-lb. tin \$13, 25-lb. pail \$56.25, 100-lb. drum \$220, 300-lb. drum \$645.

Improved Semesan Bel—for seed potatoes

This improved product will treat more than three times as many potatoes as the old Semesan Bel. An instantaneous treatment requiring no time-consuming soaking. Improved Semesan Bel is highly effective in controlling such destructive seed-borne diseases as scab, rhizoctonia, and black-leg. Protects the seed-piece against rotting by soil organisms. Improves germination and usually produces a bigger crop of better quality. One pound treats 60 to 80 bushels of seed.

Prices: 4-oz. tin 50 cts., 1-lb. tin \$1.75, 5-lb. tin \$8, 25-lb. pail \$31.25, 100-lb. drum \$120, 300-lb. drum \$345.

Du Bay Fungicides—

Both Semesan and Nu-Green have been used for years by hundreds of the leading golf-courses throughout America and have proved to be the most effective and practical treatments yet devised for preventing and controlling brown patch. They quickly kill the brown-patch fungi and promptly restore the diseased grass to a healthy condition.

Semesan Jr.—for seed field and sweet corn

A simple, quick, inexpensive dust treatment with Semesan Jr. destroys harmful disease organisms on the seed, protects seed from rotting in cold, wet soil, controls seedling blight, reduces root- and stalk-rots, and generally increases crop-yields. Harmless to seed corn. Does not slow up rate of drop. Only 2 ounces necessary per bushel of seed field or sweet corn. Costs only $2\frac{1}{2}$ cents an acre.

Prices: 4-oz. tin 50 cts., 1-lb. tin \$1.75, 5-lb. tin \$8, 25-lb. pail \$31.25.

Ceresan—for seed-grains

Ceresan is effective in controlling stinking smut and seed-borne flag smut of wheat; seedling blight of cereals caused by seed-borne scab; smuts of oats; covered smut and stripe of barley; kernel smuts of sorghums and millet; seed-borne stem-smut of rye; and angular leaf-spot, anthraenose, and certain boll-rots carried on cotton seed. Ceresan is harmless to seed and does not injure grain-drills. Use it to increase your yields and profits. Only 2 ounces needed per bushel of seed wheat, rye, sorghums, or millet, and 3 ounces for oats and barley.

Prices: 1-lb. tin 75 cts., 5-lb. tin \$3, 25-lb. pail \$12.50, 100-lb. drum \$49, 300-lb. drum \$144.

for brown patch

Both are easily applied in liquid form with any convenient type of sprayer. One pound of Nu-Green will treat from 1,000 to 2,000 square feet of turf. One pound of Semesan treats 1,000 to 3,000 square feet of turf.

Nu-Green prices: 3-oz. tin 50 cts., 1-lb. tin \$2, 5-lb. tin \$9, 25-lb. pail \$37.50, 100-lb. drum \$145, 300-lb. drum \$420.



(Jelly Medium)

STIMUGERM LEGUME INOCULATION

Alfalfa, Clovers, Soy Beans, Cowpeas, Vetch—all thrive into bumper crops when properly inoculated with Stimugerm pure-bred cultures. In addition to the increased crops, these legumes leave in the soil a heavy deposit of nitrogen which benefits all succeeding crops. Gardeners and farmers who have used Stimugerm would not be without it.

Stimugerm is a culture of bacteria especially selected and bred for maximum vitality and ability to form nodules and take nitrogen from the air.

Stimugerm is economical and easy to use. Full instructions for use accompany each package. Stimugerm is dated and guaranteed for a full year. You can obtain Stimugerm in either Jelly or Humus form.

ORDER BY NUMBER

- No. 1. For Red, Mammoth, Alsike, Crimson, and White Clover.
No. 2. For Alfalfa, White Sweet Clover, Yellow Sweet Clover, Bur Clover, and Hubam Clover.
No. 3. For all Vetches, Canada Field Peas, Broad Beans, Sweet Peas, Perennial Peas, and Garden Peas.
No. 7. For Cowpeas, Lima Beans, and Velvet Beans.
No. 8. For Garden Beans, Field Beans, Navy Beans, Kidney Beans, and Scarlet Runner Beans.
No. 9. For Soy Beans, any variety.

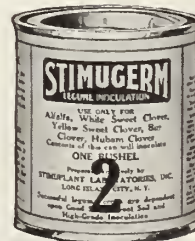
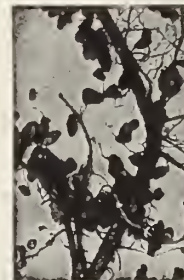
PRICES POSTPAID

SMALL SEED VARIETIES.
Nos. 1 and 2. $\frac{1}{4}$ bus. 35c., $\frac{1}{2}$ bus. 60c., bus. \$1, $2\frac{1}{2}$ bus. \$2.25.

LARGE SEED VARIETIES.
Nos. 3, 7, 8, 9. $\frac{1}{2}$ bus. 35c., bus. 60c., 2 bus. \$1, 5 bus. \$2.25.

SPECIAL GARDEN SIZE. No. 5, for Garden Peas, Beans and Sweet Peas, 25 cts.

Nodules with nitrogen worth their weight in gold



(Humus Medium)

INSECTICIDES AND FUNGICIDES

The Insecticides and machines for applying them, described in this Catalogue, are not novelties in the experimental stage, but have been thoroughly tested and found reliable for the uses for which they are intended.

Customers using large quantities of Insecticides are requested to write to us for special prices, specifying the quantities wanted. Prices quoted are subject to change.

PROTECT YOUR CROPS STIMULATE THEIR GROWTH SPRAY WITH **Pyrox**



Kills Bugs—Prevents Blights

All you have to do to keep your farm crops free from leaf-chewing insects and fungous diseases is this: Mix Pyrox with water and spray. No need to waste time and effort mixing Bordeaux and arsenicals.

We recommend Pyrox because it will not clog the smallest nozzle. It comes out a fine mist and covers the foliage completely, sticking to the leaves even through the hardest rains. Insects die. Blight is prevented. Your farm has a chance to show what it really can do for you! One pound of Pyrox makes 5 to 6 gallons of spray.

Pyrox for Potatoes. Thorough protection against insect injuries and plant-diseases is extremely vital. Tops which are full of blight-spots and holes cannot produce the greatest possible yield. Thorough and frequent spraying with the right material and a good machine will keep the vines healthy and will yield most excellent returns on the money and time invested. Even when insects and diseases are not troublesome, copper sprays stimulate the growth of the vines and increase yields.

Lb. 50 cts., 5 lbs. \$1.75, 10 lbs. \$3, 25 lbs. \$6.25, 50 lbs. \$10.75, 100 lbs. \$15.50, 300-lb. barrel \$43.50. (Not mailable.)

Nicotine Pyrox



If you have a garden-patch, you will want a jar of the new Nicotine Pyrox—Pyrox treated with Nicotine. It not only kills leaf-chewing insects, prevents blight and other diseases, as Pyrox does, but it also kills sucking insects, such as aphids, thrips, and leaf-hoppers. Pyrox, of course, is designed for most commercial crops, but in the garden, where sucking insects do so much damage, you will want Nicotine Pyrox. 10-oz. jar (makes 2 gals. spray) 50 cts., 40-oz. drum \$1.75, 10-lb. drum \$4.50. (Not mailable.)



Bowker's Calcide (High-grade Calcium Arsenate)

Excellent for potatoes and truck crops; it is cheaper than lead arsenate. Although formerly used only in the South to kill the cotton-boll weevil, Calcide is now employed in other sections to kill such pests as potato bugs, bean beetles, and other leaf-chewing insects. Calcide may be applied either wet or dry. 1-lb. pkg. 25 cts., 4-lb. pkg. 45 cts., 25-lb. pkg. \$2.10, four 25-lb. bags \$7.50.

Bowker's Dry Lime Sulphur



Bowker's Dry Lime Sulphur is made by a special patented process which keeps the product in good physical condition, thus insuring its going into suspension quickly. Dry Lime Sulphur does not have some of the disagreeable features of the Liquid and is now generally accepted by fruit-growers everywhere. It is used either as a dormant spray to kill scale or as a summer spray to control fungous diseases such as scab, rot, etc. 1-lb. pkg. 35 cts., postpaid 40 cts.; 5-lb. pkg. \$1.50, postpaid \$1.65; 12½-lb. bag \$2, postpaid \$2.25; 25-lb. drum \$4, postpaid \$4.40; 100-lb. drum \$11.50.

Bowker's Liquid Lime Sulphur (Concentrated)

Prepared from the highest grade of lime and the purest sulphur, combined in especially designed apparatus and in quantities so large as to allow plenty of time for storage and settling. Thus, the solution which reaches you is cherry-red in color, clear and sparkling. It will not crystallize, thicken up in the barrel, or clog the finest nozzles. If used according to directions, Bowker's Lime Sulphur will kill every scale that it touches. 1-qt. can 45 cts., postpaid 60 cts.; 1-gal. can 90 cts., postpaid \$1.20; 5-gal. can \$3.25, 30-gal. bbl. \$7.80, 50-gal. bbl. \$9.50. Containers not returnable.

Stewart's Lime-Sulphur Hydrometer

Gives specific gravity and Baumé readings. Complete with test-jar and instructions for use. \$1.25, postpaid \$1.50.

Bowker's Powdered Arsenate of Lead



The result of 33 years of manufacturing this product—a longer experience than that of anyone else in the business. Bowker's can be used either as a spray or as a dust for all external chewing insects. It will not burn or injure your crop. It is the fineness of Bowker's Arsenate of Lead that causes it not only to spread and to stick better, but to kill better. The smaller the particles, the more effective they are when taken into the organs of an insect. Unlike some brands, Bowker's mixes easily, stays well in suspension, with no trouble from clogged nozzles. Sticks to the foliage through heaviest rains. In Bowker's you obtain unusual efficiency at no additional cost. ½-lb. pkg. 20 cts., 1-lb. pkg. 35 cts., 4-lb. pkg. 80 cts., 25-lb. pkg. \$3.75, four 25-lb. pkgs. \$12.50.

Bowker's Powdered Bordeaux Mixture



A powerful fungicide for the control of blights, rusts, and rots on any crops where Bordeaux is recommended by the experiment stations or other agricultural authorities. Fine, light, and fluffy, Bowker's Bordeaux mixes easily and completely. Hence it covers evenly and sticks well to the foliage. When bugs or worms are present, use Bowker's Pyrox in place of Bordeaux, as Bordeaux contains no poison. Bowker's Powdered Bordeaux Mixture must pass rigid tests both as to quality and fineness, etc. 1-lb. carton 35 cts., postpaid 45 cts.; 4-lb. bag 80 cts., postpaid 95 cts.; 25-lb. bag \$3.75, postpaid \$4.15; four 25-lb. bags \$13.50.

The postal regulations will not permit poison to be sent through the mail. Therefore insecticides containing poisons cannot be sent parcel post, and must be sent by express or freight. On non-poisonous insecticides, the postpaid prices are given in connection with the price.

SCALECIDE

THE COMPLETE DORMANT SPRAY

SCALECIDE

"Makes a Tree Outgrow Its Troubles"

Scalecide

Since 1904, Scalecide has been famous for its effectiveness against the San José scale and all other scale insects, because it has always been a miscible oil of the highest quality. But Scalecide is not only a scale spray, it kills all other pests which winter on the tree. It is the complete dormant spray. Applied as a delayed dormant spray in the spring, diluted 1 to 15 (12 gallons to a 200-gallon spray tank), Scalecide controls aphids, European red mite, pear thrips, and red bug; diluted 1 to 12½ (15 gallons to a 200-gallon spray tank), it also controls leaf-roller. Applied in the fall (1 to 15), Scalecide controls peach leaf-curl and pear psylla. Either fall or spring spraying with Scalecide (1 to 15) controls scale, bud-moth, case-bearer, leaf-miner and fungous cankers.

No Nicotine Required

The fact that Scalecide, applied as a delayed dormant spray, controls aphids without nicotine, means much more than the saving of cost of the nicotine; it means the control of aphids year in and year out by the simple method of spraying annually with Scalecide.



1 qt.	\$0 70
1-gal. can.	1 60
5-gal. can.	6 00
15-gal. drum \$11.50. Returnable drum extra \$2.	13 50
30-gal. drum \$20. Returnable drum extra \$2.50.	22 50
50-gal. drum \$25. Returnable drum extra \$3.	28 00

Cost of drum will be refunded when returned to B. G. Pratt Co., Hackensack, N. J., prepaid.
Price on 5 barrels and upwards quoted on request. ASK FOR SCALECIDE BOOKLET.

Controls European Red Mite

Scalecide, applied as a delayed dormant spray, also kills the eggs of European red mite. In New England, where red mite has been a serious pest for several years, Scalecide has been used with truly remarkable success. Tests at both the Connecticut and Massachusetts Experiment Stations have conclusively proved its effectiveness.

Scalecide-Sulfocide Combination

Scalecide 1 to 100, combined with Sulfocide 1 to 200, is the ideal pre-pink and pink spray for apples. It not only controls late-hatching aphids and aphids which the ants bring on to the trees after the dormant spray, but also thrips, red bug, and soft-bodied sucking insects.

This combination is a strong fungicide for first protection against scab, but it costs less than Nicotine alone, not counting the scab-protection at all.

It gives the foliage a lustrous waxed green color, and when harvest comes the fruit is noticeable for its beautiful color and finish.

PRICES

Postpaid

\$0 85
1 90

SULFOCIDE

A Better Summer Spray

The experienced fruit-grower does not need to be told of the need for a better summer spray. He knows that not one of the common fungicides fully meets his requirements. For instance, Bordeaux cannot be used on peaches and it may russet apples. Commercial lime-sulfur is not suitable for peaches and may have a tendency to devitalize the foliage and dwarf the fruit.

Sulfocide does not have these disadvantages and can be used on both peaches and apples. When sprayed, it quickly decomposes, leaving a film of extremely fine sulfur.

Use Sulfocide for apple scab, pear scab, brown rot of peaches, and fungous diseases of fruits and vegetables.

Sulfocide is used alone or in combination with calcium arsenate or Kayso and calcium arsenate or Kayso and arsenate of lead. Nicotine may also be added to any of these combinations, if needed.

Sulfocide labels contain full instructions for making combination sprays. Common usage is 4 pounds of Kayso, 4 pounds of arsenate of lead or calcium arsenate, and one gallon of Sulfocide to a 200-gallon spray-tank. When using calcium

arsenate the amount of Kayso may be safely cut to 2 pounds to 200 gallons.

Increased Codling Moth kill with less arsenate is an important feature of the combination of Kayso, arsenate of lead or arsenate of calcium, and Sulfocide. Growers having a special codling moth problem are advised to use 2 pounds of Kayso, 4 pounds of calcium arsenate and one gallon of Sulfocide to a 200-gallon tank. (Calcium arsenate is unsafe with lime-sulfur.) Lime-sulfur and Bordeaux decrease the killing power of arsenates, whereas Sulfocide increases it.

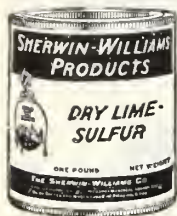
For vegetables, Sulfocide is unexcelled. Use 1 to 200. It is one of the greatest bean sprays known. Also effective on tomatoes, eggplants, peppers, cucumbers, and melons.

PRICES

Ppd.

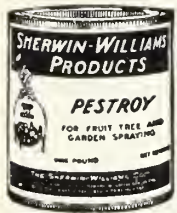
1-pint can	\$0 70	\$0 80	10-gallon can.	\$15 00
1-quart can ...	1 00	1 15	30-gallon bbl.	39 00
1-gallon can ..	2 75	3 05	50-gallon bbl.	60 00
5-gallon can ..	8 75			

SHERWIN-WILLIAMS Insecticides and Fungicides



A dormant and summer spray for apples, pears, plums, and many other tree fruits. A true Dry Lime-Sulfur. Not a substitute for Lime-Sulfur Solution, but is standard 33-degree Baumé Lime-Sulfur Solution in dry, powdered form. It dissolves readily in water. Two pounds equivalent to 1 gallon solution.

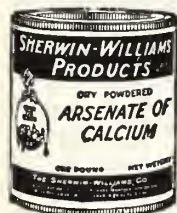
1-lb. can.....	\$0 35	Postpaid \$0 45
5-lb. can.....	1 50	1 65
12½-lb. bag.....	2 00	2 25
100-lb. drum.....	12 50	



Designed to meet the requirements of an all-round spray for the home-garden and orchard. It contains the correct amount of Bordeaux to prevent fungous diseases and the correct amount of Arsenate of Lead to control chewing insects.

Pestroly is in dry, powdered form and will keep indefinitely. It may be applied as a dust or a wet spray. If dusted it should be applied just as it comes from the package. If sprayed, directions given on the label should be followed. Pestroly mixes freely with water.

½-lb. carton.....	\$0 30	4-lb. bag.....	\$1 40
1-lb. carton.....	50	100-lb. drum.....	25 00



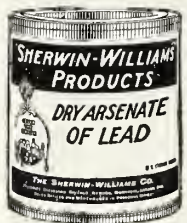
This is a very effective poison to use on potatoes against "bugs" and flea-beetles. It is very adhesive, covers thoroughly, and will not burn the foliage. It will mix thoroughly with Bordeaux or with water, and stays well in suspension.

1-lb. carton.....	\$0 25
4-lb. bag.....	45
24-lb. carton in 4-lb. bags.....	2 00



An extremely fine, fluffy Bordeaux Mixture in dry, powdered form. Mixed readily with water and stays well in suspension. It is very effective when applied as a dust. When used at the rate of 6 pounds to 50 gallons of water it will give a 3-3-50 Bordeaux formula; 8 pounds a 4-4-50 formula, etc. Controls fungous diseases of apples, pears, cherries, grapes, strawberries, potatoes, and vegetables.

1-lb. carton.....	\$0 35	Postpaid \$0 45
4-lb. bag.....	80	95
24-lb. carton in 4-lb. bags.....	3 60	3 95
100-lb. drum.....	13 50	



Contains from 30 to 33 per cent arsenic oxide thoroughly in combination with lead. It has maximum killing power, speedy action, and unquestioned effectiveness in controlling leaf-eating and chewing insects. One to 1½ pounds to 50 gallons of water will control leaf-eating insects.

½-lb. carton.....	\$0 20
1-lb. carton.....	35
4-lb. bag.....	80
24-lb. carton in 4-lb. bags.....	3 60
100-lb. drum.....	11 50

Beetle-Dust

The Mexican bean beetle is the most serious insect pest of beans and peas. To control this pest, the upper and under sides of the leaves must be dusted with a very fine powdered insecticide. **Beetle-Dust will control the Mexican bean beetle.** It is an extremely fine powdered insecticide and contains an arsenical poison and sodium fluosilicate.

1-lb. carton.....	\$0 35	24-lb. carton in 4-lb. bags.....	\$4 35
4-lb. bag.....	80		

Copper-Lime Dusts

In recent years, Copper-Lime Dusts have been used extensively on potatoes, tomatoes, celery, etc. The speed of application and satisfactory results obtained make this method of pest-control very attractive to growers. Fifty to 75 bushels average increase yield in commercial plantings is not unusual. Made from the highest grade Copper Sulphate and finest quality Hydrated Lime available.

20-80 Copper-Lime Dust. Contains 20 per cent Monohydrated Copper Sulphate which is equivalent to 7 per cent Metallic Copper and 80 per cent Hydrated Lime. It is an excellent dust for the control of potato blight, celery blight and potato leaf-spot. This Dust should be used only where plant-diseases are a problem and should not be used to control chewing insects. 100-lb. drum \$6.25.

25-75 Copper-Lime Dust. Contains 20 per cent Monohydrated Copper Sulphate and 75 per cent Hydrated Lime. It is recommended where potato blight and other diseases are serious. 100-lb. drum \$6.75.

20-20-60 Copper-Calcium-Lime Dust. This contains 20 per cent Monohydrated Copper Sulphate, 20 per cent Arsenate of Calcium, and 60 per cent Hydrated Lime. The Calcium content of this mixture makes this a good dust for the control of potato beetle, bean beetle, and other chewing insects, in addition to controlling blight and anthracnose. 100-lb. drum \$7.25.

20-25-55 Copper-Calcium-Lime Dust. Contains 5 per cent more Arsenate of Calcium than the "20-20-60" formula, and is recommended where potato blight and beetles are extremely difficult to control. 100-lb. drum \$7.50.

Prices on larger quantities will be quoted on request

Key Brand Powdered Hellebore

For the destruction of slugs, worms, caterpillars, etc. Less poisonous than paris green or arsenate of lead and safer to use when fruits and vegetables are nearly ripe. Apply just as it comes from package.

½-lb. box.....	\$0 30
1-lb. box.....	50

Sherwin-Williams Fish Oil Soap

For destruction of sucking insects and lice on plants and trees. Dissolve 1 pound Fish Oil Soap in 2 quarts of hot water, then add 8 to 10 gallons of cold water and apply with watering-pot or sprayer.

1-lb. pkg.....	\$0 40	Postpaid \$0 50
5-lb. pkg.....	1 75	1 90

Sherwin-Williams Paris Green

Effective for the control of the potato bug, grasshoppers, army worms, and cutworms. Contains about 55 per cent of arsenious oxide. May be used as a wet spray or a dust.

¾-lb. carton.....	\$0 20
1-lb. carton.....	65
5-lb. carton.....	2 75

A QUARTET OF ROSE GROWING AIDS

Aphistrogen

Kills Aphids (Plant-lice)

To kill aphids quickly, use Aphistrogen, a non-poisonous, invisible spray, non-injurious to plant-life. Simply mix with 60 times its volume of water.

2 ozs.....	\$0 50	Postpaid \$0 60
½lb.....	1 25	1 40
1 lb.....	2 25	2 40
2 lbs.....	3 50	3 70
12 lbs.....	15 00	15 25

Fungitrogen

Controls Mildew and Black-Spot

A preventive and remedy for mildew, black-spot, and other fungous diseases. Adds vigor to the plant. Mix with 60 times its volume of water.

4 ozs.....	\$0 45	Postpaid \$0 55
½pt.....	75	85
1 pt.....	1 25	1 40
1 qt.....	2 00	2 25
1 gal.....	6 00	6 30

Insectrogen

Destroys Leaf-eating Insects

Leaf-eating insects, such as Japanese beetles, slug-worms, etc., may be killed with Insectrogen. Mix with 60 times its volume of water.

4 ozs.....	\$0 60	Postpaid \$0 70
½pt.....	1 00	1 10
1 pt.....	1 75	1 90
1 qt.....	2 75	3 00
1 gal.....	8 00	8 30

Gerogen

Soil-Disinfectant — Soil-Dressing

Destroys insect larvae and fungus spores that have fallen to the ground; fertilizes the soil. A 10-pound tin sufficient for 30 to 50 plants.

1-lb. tin.....	\$0 75	Postpaid \$0 85
2-lb. tin.....	1 25	1 40
5-lb. tin.....	2 75	2 95
10-lb. tin.....	4 75	5 00
25-lb. drum.....	11 00	11 35

KAYSO

SPRAY SPREADER & ADHESIVE

For Orchard and Garden Sprays

Kaysō is the combined casein spreader and adhesive, recommended by experts in horticulture and used by progressive fruit- and vegetable-growers and florists throughout the United States.

Because of increased spreading and wetting properties, a tank of spray containing Kaysō will cover more trees than ordinary spray. Kaysō reduces waste of spray by preventing it from collecting in drops and rolling off the smooth surfaces of fruit, leaves, and bark. Kaysō raises the market value of your fruit by reducing spray-burn and by producing finer finished and more evenly colored fruit.

PRICES

2 lbs. 50 cts., postpaid 60 cts.;
100 lbs. \$16.50

Ask for Special Circular

Key Brand Cutworm Killer

For use as poisonous bait against cutworms and slugs by placing around plants subject to attack. It has an enticing odor that worms prefer to vegetation. One pound is sufficient for 100 plants in hills or 75 in rows. 1-lb. box 50c., 5-lb. box \$2, 25-lb. pkg. \$7.50.



"Brooklyn Brand"

Commercial Flour Sulphur

For use in making lime-sulphur solution and for dusting; 99½ per cent pure. Lb. 10 cts., 5 lbs. 40 cts., 10 lbs. 60 cts., 25 lbs. \$1.25, 50 lbs. \$2, 100 lbs. \$3.25, 500 lbs. \$15.50.

Bowker's

Monohydrated Copper Sulphate

For use in all home-mixed dusts requiring Copper Sulphate. Contains approximately 35 per cent Metallic Copper. 12½-lb. bag \$2.50, 100-lb. drum \$12.75.

Copper Sulphate (Blue Vitriol)

Used for making Bordeaux Mixture solution. Lb. 25 cts., 5 lbs. 75 cts., 10 lbs. \$1.25, 50 lbs. \$3.75, 100 lbs. \$6.50, 450-lb. bbl. \$24.75.

"Bell-Mine" Rotary Kiln Lime

Used in fruit-tree and vegetable-spraying mixtures. Has the endorsement of leading agricultural authorities for Bordeaux Mixtures and for all other home-mixed insecticides and fungicides. Furnished in either pulverized, pebble, or lump form. 180-lb. steel pkg. \$2.65. Larger quantities quoted on request.



Hammond's Slug-Shot

Hammond's Slug-Shot is used from ocean to ocean. A light, composite, fine powder, it is easily distributed either by dusters, bellows, or in water and sprayed. It is thoroughly reliable in killing the

Current-Worm
Potato-Bug
Cabbage-Worm
Slug on Roses
Caterpillars
Dahlia-Borer
Mexican Bean Beetle

Army Worm
Cutworms
Sow-Bugs
Lice on Animals
Lice on Fowls
Bugs on Melons

1-lb. can. \$0 25
5-lb. can. 75

25-lb. bag...\$3 50

Sherwin-Williams Pruning Compound

Possesses all the qualities necessary in a preparation to properly protect pruning-wounds. It successfully checks the weathering of the wound and also prevents the growth of bacteria or fungi. 1-qt. can 75 cts., postpaid 90 cts.; 1-gal. can \$2.50, postpaid \$2.80.



A Non-Poisonous Weed Killer in Powder Form

Kills Poison Ivy

Apply as a spray or as a dust

Will exterminate all undesirable vegetation including Poison Ivy, Canada Thistle, Johnson Grass, etc., without danger of poisoning humans or animals. Especially recommended for obtaining weed-free driveways, paths, tennis-courts and gutters. A pound will kill about 100 square feet of weeds.

1-lb. size.....	\$0 50	Postpaid
3½-lb. size.....	1 50	\$0 60
15-lb. drum.....	3 50	3 85
50-lb. drum.....	7 50	
100-lb. drum.....	13 50	
200-lb. drum.....	26 00	

Hammond's Weed Killer

Hammond's Weed Killer has been in use for many years, and has held a useful place in all tidy towns to prevent the growth of weeds along gutters, paths or tennis-courts. Will, naturally, kill any kind of grass without distinction, so it must be used cautiously where grass is desired. Dilute 1 gallon to 30 or 40 gallons of water. Qt. 85 cts., gal. \$2.25, 5 gals. \$8.50, 30-gal. drum \$40.

Climax Lawn Sand

Kills weeds in the lawn without injury to the grass

A chemical preparation that will destroy Plantain, Dandelion, and all other weeds in lawns, golf greens, etc. 3½-lb. can 75 cts., postpaid 90 cts.; 7-lb. can \$1.35, postpaid \$1.60; 14-lb. can \$2.50, postpaid \$2.80; 28-lb. can \$4, postpaid \$4.45.



Formaldehyde

For wheat and barley smut, use one pint of Formaldehyde in 40 gallons of water. Sprinkle or dip seed in tubs; cover several hours; sow damp. For oat smut, spray oats with one pint Formaldehyde in 10 pints of water. Sack or sow.

For Potato Scab and Rhizoctonia

Soak potatoes two minutes in warm solution (118° to 122° Fahr.) of 1 pint Formaldehyde in 15 gallons water. Small lots on the stove in washboiler; larger lots in tank heated with tank heater or by steam from tractor or other boiler.

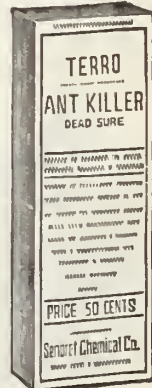
Treat soil with Formaldehyde to overcome root rot of most vegetables (U. S. Bulletin No. 217). Will prevent onion smut, lettuce rosette and rot, tobacco bed-rot, and damping-off fungi.

Lb. can 35 cts., 10 1-lb. cans \$3.25, 50 1-lb. cans \$14, 60-lb. keg \$9.50.

Ask for booklet and full directions.

Terro Ant Killer

Will drive ants in 24 hours from pantries, refrigerators, plants, flowers or any other place infested with them. Terro is guaranteed to do the work or money back. Bottle 50 cts. (postpaid 60 cts.).



Trowbridge's Grafting-wax

This brand of Grafting-wax really needs no introduction. It is the oldest brand on the market, and is known by the best nurserymen and horticulturists to be possessed of the most even consistency and elasticity of any. It is used by softening in warm water, or by the warmth of the hand, using to prevent sticking to the hand, grease or oil. It can then be drawn out as thin as paper and spread on the cut and around the graft. Another method of using is by melting Wax as it comes from the package and applying with a brush.

	Postpaid
½-lb. pkg.	\$0 30 \$0 35
1-lb. pkg.	50 60

Vermol Worm Eradicator

For Golf Greens and Fine Lawns

The best of the non-poisonous class of worm-killing preparations. A powder that is harmless to animals, but remarkably effective in promptly bringing earthworms to the surface and killing them. Apply Vermol at the rate of one pound to 18 square feet and water in thoroughly, or apply while it is raining. The best time to apply is in the morning or evening. Vermol will not injure the grass.

25 lbs.	\$2 25	500 lbs.	\$30 00
50 lbs.	3 50	1,000 lbs.	57 50
100 lbs.	6 50	2,000 lbs.	110 00



Derrisol

is an odorless, non-poisonous insecticide, endorsed and used by many agricultural college experiment stations, florists, orchardists, and gardeners for controlling aphids, plant-lice, thrips, leaf-hoppers, red spiders and other soft-bodied sucking insects, and it can be used for controlling some small leaf-eating larvae, such as cabbage worms, saw-fly larvae, and currant worms. One part of Derrisol diluted with 800 parts of water to control most insects. Derrisol is pleasant and safe to use.

	Postpaid		Postpaid
1-oz. bottle.....	\$0 35	2-lb. can.....	\$3 25
8-oz. bottle.....	1 25	10-lb. can.....	12 00
1-lb. can.....	2 25		12 25



Nursery Volck

Effective, Safe and Easy to Use

Ornamental shade trees, shrubs, conifers, and greenhouse plants require a great deal of care to preserve their natural beauty and vigor. Spraying with contact insecticides is the only satisfactory means of controlling the sap-sucking insects such as scales, mites, aphids, mealy bugs, white flies, etc. Nursery Volck is especially adapted to nursery, greenhouse, and shade-tree spraying. It has all the effectiveness of the original Volck but is safer when applied to tender plants.

	Postpaid		Postpaid
1/2-pt. can.....	\$0 35	1-gal. can.....	\$3 00
1-pt. can.....	60	5-gal. can.....	12 00
1-qt. can.....	1 00		15 00



Stanley's Crow Repellent Protects Your Corn

during the period when it is most easily damaged, by ridding your crop of crows and other corn-pulling birds, and animal pests, such as moles, gophers, woodchucks, squirrels, etc.

It saves loss of seed and labor of replanting. It positively will not clog any planter. It protects seed from rotting in the ground. It insures larger yield per acre. It is non-poisonous and will not injure the seed of any kind of corn. It will not kill birds or animals, but will keep them away and prevent destruction by them.

Large can, enough for 2 bushels of seed, \$1, postpaid \$1.15; small can, enough for 1 bushel of seed, 60 cts., postpaid 70 cts.

SUNOCO

SELF EMULSIFYING SPRAY

The New York Agricultural Experiment Station reports "commercial control" of rosy aphids with Sunoco; the Connecticut Station finds Sunoco superior to lime-sulfur and nicotine. The experiences of growers everywhere have shown remarkable results.

For **ORNAMENTAL TREES**, tree experts agree that Sunoco Spray is the safest, most efficient material. Spruce gall aphids, euonymus, pine leaf, juniper, terrapin and similar scales easily controlled with Sunoco.

RUSTY EVERGREENS—spruce, arborvitae, etc., caused by red spider, may be prevented by using Sunoco Spray in June.

	Postpaid		Postpaid
1-gal. can.....	\$1 25	15-gal. drum.....	\$9 30
5-gal. can.....	5 00	30-gal. drum.....	15 90
		50-gal. drum.....	23 00

SPECIAL CIRCULAR ON REQUEST

Mago-o-tite

Effective in the control of root maggot on cabbage, cauliflower, kale, brussels sprouts, broccoli, onions, radishes, turnips, and rutabagas. Sprinkle Mago-o-tite freely in and over the drill or seed-bed when seeding, and if setting out cabbage and cauliflower plants, use it freely alongside the plant and on the surface of the ground. 1-lb. tin 25 cts., 5-lb. tin 90 cts., 25-lb. steel container \$2.75, 50-lb. steel container \$5.

Wilson's O. K. Plant Spray

WHY BUGS LEAVE HOME



TRADE MARK REG.

A powerful, yet safe and efficient insecticide for general outside or greenhouse use. Positive control for most insects commonly found attacking flowering plants, shrubs, and ornamentals.

	Postpaid
1/2 pt.....	\$0 40
1 qt.....	1 00
1 gal.....	3 00
5 gals.....	12 00

CYANOGAS

CYANOGAS A. Dust. For the certain extermination of moles, ground hogs, rats, mice, ants, fleas, wasps, and

various other pests.

1/2-lb. tin.....	\$0 45	25-lb. tin.....	\$10 00
1-lb. tin.....	75	100-lb. drum.....	30 00
5-lb. tin.....	3 00		

CYANOGAS G. Fumigant. Fine for greenhouse and mushroom-house fumigation, wire-worm control, and all general fumigation work. In the greenhouse, 1/4 ounce per 1,000 cubic feet will control aphids, white fly, soft scale, thrips, and other greenhouse pests. Very efficient and economical.

5-lb. tin.....	\$3 00	100-lb. drum.....	\$30 00
25-lb. tin.....	10 00		

Greenhouse booklet on request.

Paradow

Pure Para dichloro beezine for peach-tree borers. When placed around the base of a peach tree, will generate a gas that will kill the borers in that tree. Use about 1 ounce per tree. Full directions on container. 1-lb. pkg. 65 cts., 5-lb. pkg. \$2.50.



Bourbon's Fluosilicate Dust Mixture

Many growers who have a prejudice against the use of arsenicals, because of their poisonous nature, find in Bourbon's Fluosilicate Dust Mixture a satisfactory control-measure against insects such as Mexican bean beetles, potato bugs (beetles), striped cucumber beetles, blister beetles, cutworms, and other scourges of the plants. It is also effective for the riddance of ants and roaches and to kill lice on fowls. This mixture contains a light, fine quality of Sodium Fluosilicate, carefully mixed with a suitable carrier so as to make a product adapted for dusting purposes and ready for use without further preparation.

	Postpaid		Postpaid
Small can.....	\$0 30	50 lbs.....	\$8 00
5 lbs.....	1 00	100 lbs.....	15 00
25 lbs.....	4 50		

A Safe, Sure, Non-Arsenical Insecticide

Thousands of practical farmers endorse Dutox as an effective control for beetles and leaf-eating insects on vegetables, fruit, etc. They know by experience that Dutox means crop protection. It does not injure plants nor impair fertility of the soil. Used as a dust, it is applied either alone or diluted with inert ingredients, or it may be applied as a spray. Effective control of the widely prevalent Mexican Bean Beetle costs less with Dutox than with other insecticides.

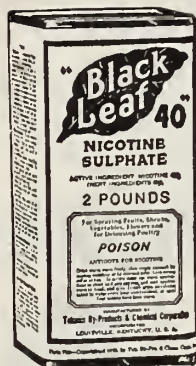
	Postpaid
1-lb. bag.....	\$0 35
6-lb. bag.....	1 50
Case, six 6-lb. bags.....	7 20



Black Leaf 40
40% NicotineKills
Aphis

Black Leaf 40 is highly recommended by experiment stations and by spraying experts throughout the United States and the Dominion of Canada.

The standard contact insecticide for spraying vegetables, fruits, flowers, and plants to destroy aphids, thrips, leaf-hoppers, and similar "sucking" insects. Also effective for dipping purposes. Full directions with every package.



1-oz. bottle....\$0 35	2-lb. can..\$3 75
5-oz. can....1 00	5-lb. can..7 00
1-lb. can....2 50	10-lb. can..11 85

"NICO-FUME"
PRODUCTS
Liquid—Paper—Powder
FOR GREENHOUSES**Nico-Fume Liquid**

A highly refined solution of free nicotine, guaranteed to contain fully 40 per cent of nicotine. Extensively used by leading florists for spraying or vaporizing in greenhouses to destroy aphids, thrips, etc. The labels contain complete directions. 1-lb. tin \$2, 4-lb. tin \$5.85, 8-lb. tin \$10.85.

Nico-Fume Tobacco Paper

Consists of sheets of paper impregnated with high-strength nicotine, folded and punched, ready to hang up and burn. Guaranteed to contain not less than 20 per cent of nicotine, its original nicotine content (when manufactured) being much higher. 24 sheets \$1.25, 144 sheets \$4.75, 288 sheets \$8.25.

Nico-Fume Tobacco Powder

Tobacco Powder impregnated with a high-strength nicotine solution. Effective for fumigating in greenhouses to destroy aphids, thrips, etc. The directions and illustrations are set forth on the labels. 1-lb. \$1, 5 lbs. \$3.50, 10 lbs. \$6.15.

Tobacco Dust

A specially ground Tobacco Dust, guaranteed to contain not less than 1/2 of 1 per cent nicotine. It is particularly useful in vegetable- and flower-gardens, in greenhouses and orchards, wherever a dusting powder is desired to destroy plant-lice and thrips. Owing to its extreme fineness it readily floats in the air, enveloping the entire shrub or tree in a dense cloud. 2-lb. bag 25 cts., postpaid 35 cts.; 10-lb. pkg. 75 cts., postpaid 95 cts.; 100-lb. sack \$3.50, 500 lbs. \$16.25.

Tobacco Stems

Bale (about 150 lbs.) \$1.75, 3 bales \$4.80, 10 bales \$14.

the EVER GREEN
NON-POISONOUS INSECTICIDE
to
PROTECT YOUR GARDEN

Effective against cucumber and melon beetles, cabbage worms, rose slugs, aphids, leaf-hoppers, and most other plant insects, including cutworms.

Non-Poisonous—Ever Green is harmless to man, live stock, birds and pets. Kills only insects. Eliminates washing of fruits and vegetables before marketing.

Non-Injurious—Won't burn or injure the tenderest crops. Can be used on celery and roses. Doesn't injure the soil in any way.

No Deterioration—When undiluted Ever Green retains its strength indefinitely.

Pleasant and Easy to Use—No continuous agitation necessary—mix it by pouring into water and stirring. No unpleasant odor. Sprayers can't get clogged, for Ever Green stays in solution.

1-oz. bottle.....	\$0 35	\$0 40
6-oz. bottle.....	1 00	1 10
16-oz. bottle.....	2 00	2 10
32-oz. can.....	3 50	3 75
1-gal. can.....	11 50	

**RED ARROW**
NON-POISONOUS
INSECT SPRAY
(PYRETHRUM SOAP)

The safe, pleasant Spray to use, effective on chewing and sucking insects. Safe because it is harmless to children, adults, domestic animals and useful wild bird-life. Safe, also, because it does not injure or stain flowers or foliage. Safe to use on fruits and vegetables before marketing.

1-oz. bottle.....	\$0 35	\$0 40
3 1/2-oz. can.....	1 00	1 10
1/2-pt. can.....	1 75	1 90
1-pt. can.....	3 25	3 45
1-qt. can.....	6 00	6 25
1-gal. can.....	20 00	

**Pomo-Green****With Nicotine****A Leaf-green ALL-IN-ONE
Dust or Spray**

Dusting with "leaf-green" Pomo-Green is the protective method used by experts! Pomo-Green prevents and controls black-spot, mildew or chewing insects on flowering plants, shrubs, and roses quickly and effectively.

Also controls many other fungous diseases of flowering plants and shrubs.

Protect new growth by dusting with Pomo-Green once each week throughout the growing season. 1-lb. can 75 cts., 5-lb. carton \$3.

Antrol**The National Ant Control****DESTROYS ANTS**

New method "gets" them at their source—safe, permanent, effective.



The Antrol system is adapted to any size house or garden and quickly destroys all species of sweet-eating ants. It is composed of small glass containers and a special formula of syrup. The containers are partially filled with syrup and placed about the outside edges of the house or along "ant" trails in the garden if the infestation occurs there. The ants smell the syrup, eat it and then transmit its mild poison to the queen in the nest. Soon the entire ant colony is destroyed!

The complete system should cover every 15 feet around the outside of the house or "ant" trails in the garden. Once installed permanent, effective and safe protection is insured from these annoying pests. Antrol sets containing 4 containers and 1 4-oz. bottle of syrup, 95 cts. Antrol extra containers, 15 cts. each; Antrol syrup, 4-oz. bottle 45 cts., pt. 95 cts., gal. \$3.75.

Snarol **The National Pest Control****QUICKLY KILLS GARDEN PESTS**

Science provides new safe method that does the work without fuss. Snails, cutworms, slugs, grasshoppers, sow-bugs, earwigs, etc., are exterminated.

Snarol is a ready prepared meal that you simply broadcast on the ground, under the vegetation. The pests eat the meal and are quickly destroyed.

Snarol will not deteriorate from rain or sprinkling and also is non-injurious to vegetation when used according to simple directions. 1 1/2-lb. pkg. 45 cts., 4-lb. pkg. 95 cts., 15-lb. pkg. \$3.50, 50-lb. bags \$9.50.

Tree Tanglefoot

A sticky material for banding trunks of trees, vineyards, etc., to protect them against the ravages of climbing insect pests.



No mixing is required. It comes ready for use and is easily and quickly applied with a wooden paddle. One pound makes 15 to 20 lineal feet of band.

1-lb. 60 cts., postpaid 70 cts.; 5 lbs. \$2.75, postpaid \$2.90; 10 lbs. \$5.25, postpaid \$5.50; 25 lbs. \$11, postpaid \$11.40.

WIARD PLOWS

The Wiard Plows have been continuously manufactured since 1804. Their history has been a record of constant improvement in efficiency, strength and durability, and they are today recognized as leaders in this class of Agricultural Implements.

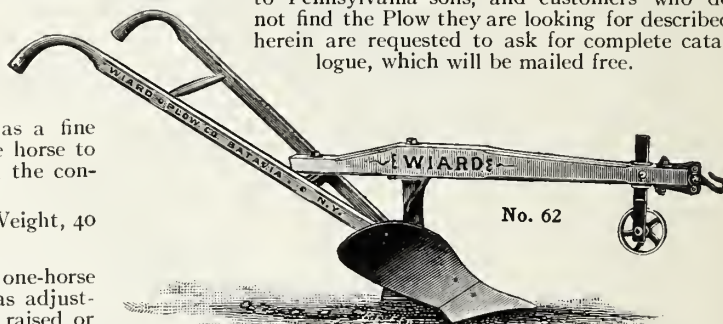
The real quality of an implement is shown, not by what its makers claim for it, but by the results which it gives in the hands of the average user. Therefore, go to the farmer, whom you consider fair and without prejudice, and see what he says about Wiard Implements; in other words, "Ask the man who owns one." Space will permit of our showing but a few of the leading styles adapted to Pennsylvania soils, and customers who do not find the Plow they are looking for described herein are requested to ask for complete catalogue, which will be mailed free.

WIARD ONE-HORSE PLOWS

No. 62. Right-Hand, Chilled Moldboard

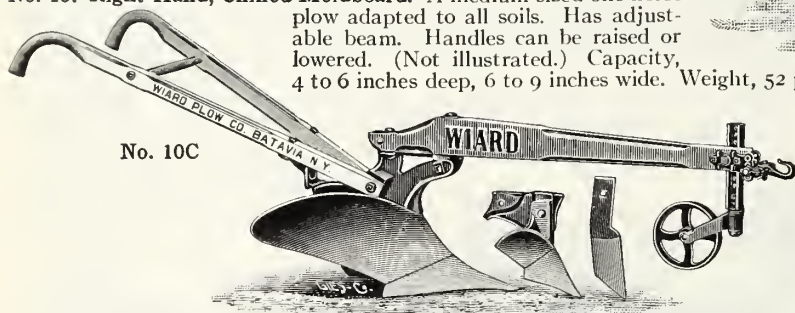
This is the smallest Wood Beam Wiard Plow. It has a fine turning moldboard and an adjustable beam, allowing the horse to walk in the furrow or on the land; is light, strong, and the construction is perfect.

Capacity, 3 to 5 inches deep, 6 to 8 inches wide. Weight, 40 pounds. Plain, \$8; wheel, \$1.75 extra.



No. 62

No. 13. Right-Hand, Chilled Moldboard. A medium-sized one-horse plow adapted to all soils. Has adjustable beam. Handles can be raised or lowered. (Not illustrated.) Capacity, 4 to 6 inches deep, 6 to 9 inches wide. Weight, 52 pounds. Plain, \$9; wheel, \$1.75 extra.



No. 10C

No. 10C. Right-Hand, Chilled Moldboard

This is the acme of perfection in one-horse Plows. Adjustable beam so that the horse can walk in the furrow or on the land.

Capacity, 4 to 7 inches deep, 6 to 11 inches wide. Weight, 77 pounds. Plain, \$12.75; wheel, \$2 extra; jointer or colter, \$3.50 extra.

WIARD TWO-HORSE PLOWS

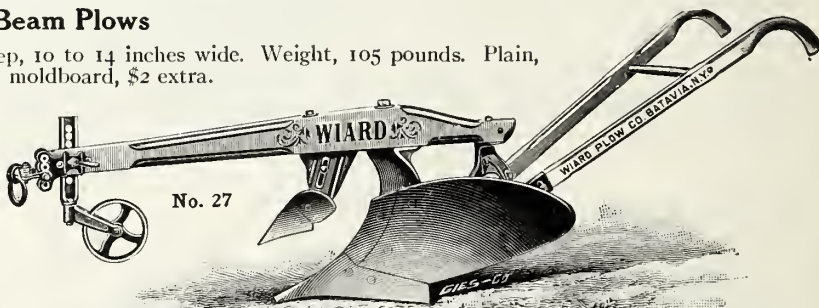
These Plows are constructed with special reference to obtaining the greatest strength with least weight. They have been thoroughly tested by hundreds of farmers in all kinds and conditions of soil and are unexcelled for general-purpose work.

Wood Beam Plows

No. 27. Left-Hand. Capacity, 6 to 8 inches deep, 10 to 14 inches wide. Weight, 105 pounds. Plain, \$20; wheel, \$2 extra; jointer, \$4.75 extra; steel moldboard, \$2 extra.

No. 28. Left-Hand. Capacity, 7 to 9 inches deep, 12 to 16 inches wide. Weight, 112 pounds. Add \$1 to prices of No. 27.

No. 26½. Right-Hand. Capacity, 5 to 8 inches deep, 10 to 14 inches wide. Weight, 115 pounds. Plain, \$20; wheel, \$2 extra; jointer, \$4.75 extra; steel moldboard, \$2 extra.



No. 27

Steel Beam Plows

The latest "New Pattern" series of combination, grooved steel beam, general purpose Plows.

No. 103. Left-Hand. Two-horse. Capacity, 4 to 7 inches deep, 9 to 13 inches wide. Weight, 120 pounds. Plain, \$17.75; wheel, \$2 extra; jointer, \$4.75 extra; steel moldboard, \$2 extra.

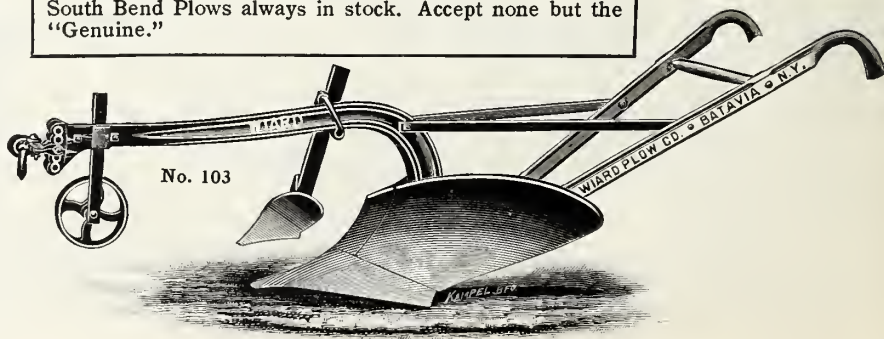
A two-horse Plow of medium capacity, and suited to either sod or stubble plowing.

No. 104. Left-Hand. Two- or three-horse. Capacity, 5 to 8 inches deep, 11 to 15 inches wide. Weight, 130 pounds. Add \$1.75 to prices of No. 103.

No. 43. Right-Hand. Same capacity, size, and price as No. 103 Left-Hand.

No. 44. Right-Hand. Same capacity, size, and price as No. 104 Left-Hand.

A full line of extras for Wiard, Oliver, Vulcan, Gale, and South Bend Plows always in stock. Accept none but the "Genuine."

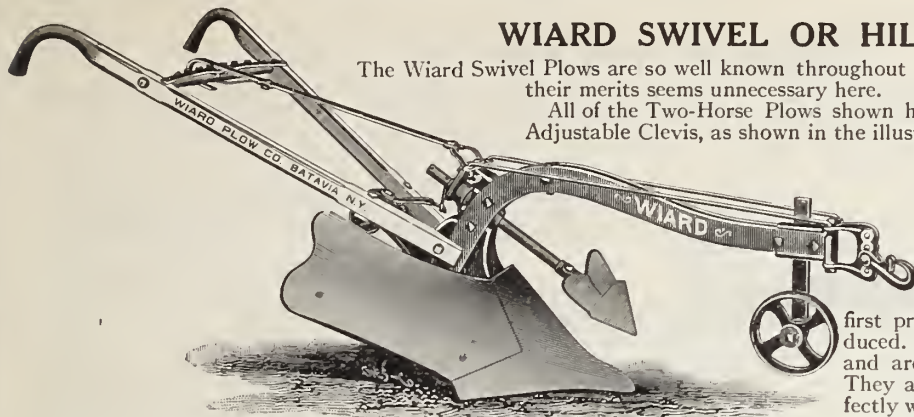


No. 103

WIARD SWIVEL OR HILLSIDE PLOWS

The Wiard Swivel Plows are so well known throughout Pennsylvania that a detailed account of their merits seems unnecessary here.

All of the Two-Horse Plows shown here are furnished with either Common or Adjustable Clevis, as shown in the illustration.



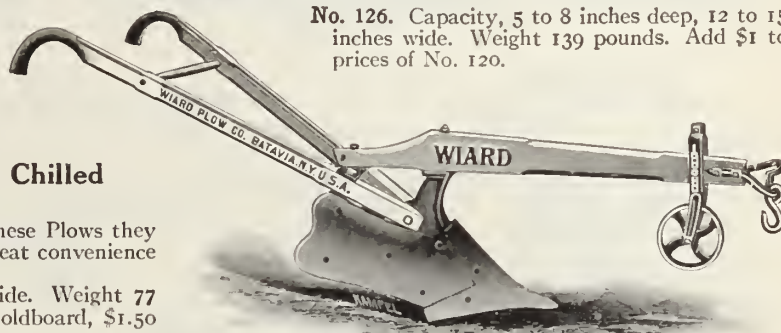
No. 120. Capacity, 5 to 8 inches deep, 10 to 13 inches wide. Weight 118 pounds. Plain, \$22.50; adjustable clevis, \$1.50 extra; wheel, \$2 extra; jointer, \$4.75 extra; colter, \$4 extra; steel moldboard, \$2 extra.

WIARD WOOD BEAM SWIVEL PLOWS

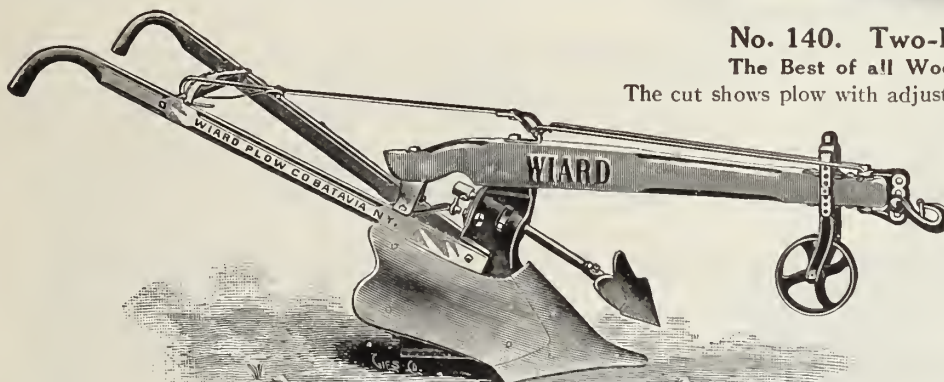
No. 21. One-Horse Hillside Plow, Chilled Moldboard

By an ingenious but simple clevis attached to these Plows they can be used with horse walking in the furrow, a great convenience for garden and vineyard work.

Capacity, 4 to 7 inches deep, 6 to 10 inches wide. Weight 77 pounds. Plain, \$13.50; wheel, \$1.75 extra; steel moldboard, \$1.50 extra.



No. 126. Capacity, 5 to 8 inches deep, 12 to 15 inches wide. Weight 139 pounds. Add \$1 to prices of No. 120.



No. 140. Two-Horse Swivel Plow The Best of all Wood-Beam Swivel Plows

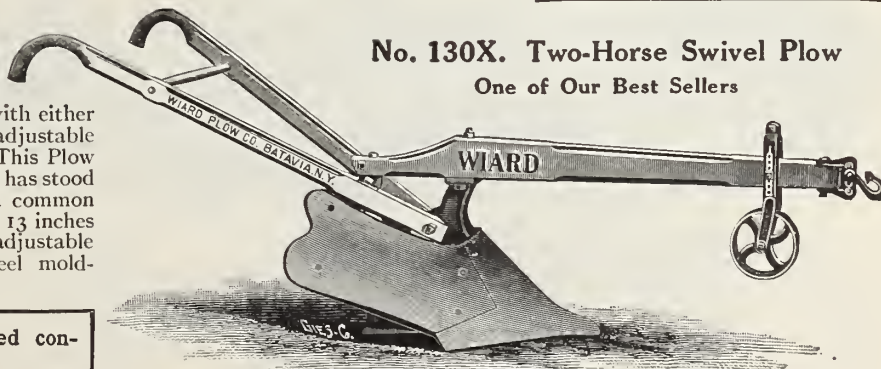
The cut shows plow with adjustable clevis and jointer. This is the most superb of all Wood-Beam Swivel Plows. It has a strong, high standard and long shoe, making it one of the most steady running Plows in our list. Capacity, 5 to 8 inches deep, 10 to 13 inches wide. Weight 115 pounds. Plain \$19, adjustable clevis, \$1.50 extra; wheel, \$2 extra; jointer, \$4.75 extra; colter, \$4 extra; steel moldboard, \$2 extra.

The Wiard leads
in Swivel Plows

This plow has about the same capacity as the No. 140, the wearing parts being the same except the shoe. The outlines are somewhat different, as shown by the cut, and the Plow is lighter. It can be fitted with either cast-iron or soft center-steel moldboard, adjustable clevis and adjustable automatic colter. This Plow has been on the market for many years and has stood the test of time. The cut shows Plow with common clevis. Capacity, 5 to 8 inches deep, 10 to 13 inches wide. Weight 104 pounds. Plain, \$18; adjustable clevis, \$1.50 extra; wheel, \$2 extra; steel moldboard, \$2 extra.

Wiard Plows have been manufactured continuously since 1804

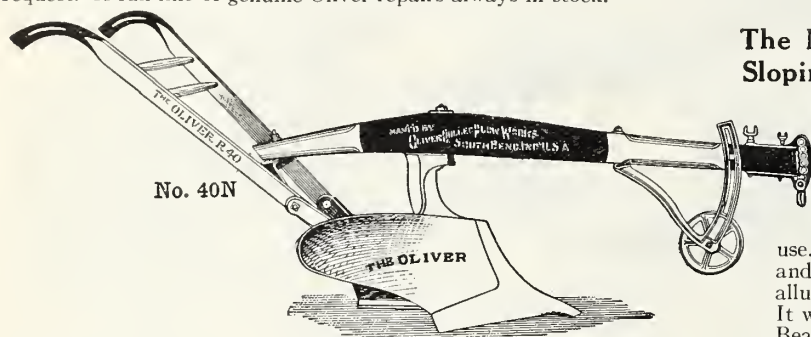
No. 130X. Two-Horse Swivel Plow One of Our Best Sellers



Oliver Chilled Plows

The Oliver Chilled Plows need no introduction to the Pennsylvania farmer. So great is the popularity of these Plows that unscrupulous parties are seeking to trade upon their good name by making and offering for sale imitation Plows and parts as genuine.

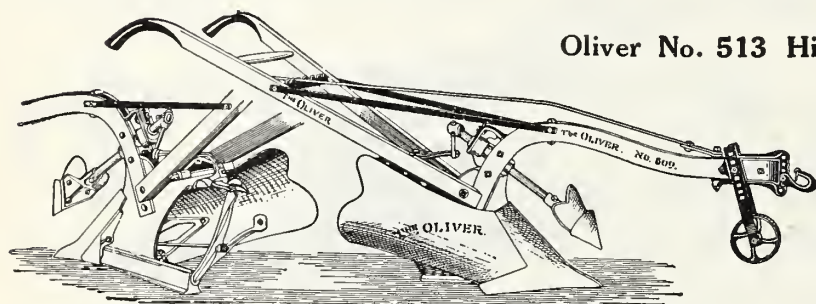
We have space to show but a few of the leading favorites among Pennsylvania farmers, but will send a complete catalogue on request. A full line of genuine Oliver repairs always in stock.



The No. 40N Wood-Beam, Full Chilled, Sloping Landside, Right- and Left-Hand

This is the veteran Plow of the Oliver line and for many years it has been familiar to a majority of the farmers in America.

The No. 40N is a two- or three-horse Plow, first-class in all respects and immensely popular, its sales exceeding those of any other Plow in use. Always reliable, its great capacity, steady running and turning qualities, make it valuable in sandy or alluvial lands, and on farms containing a variety of soils. It will turn a furrow 9 x 16 inches. Weight of Wood-Beam, 138 lbs., Steel-Beam 157 lbs. Price, Wood- or Steel-Beam, Plain, \$21.50. Wheel, extra \$2.50; Jointer for Wood-Beam, extra \$3.85; for Steel-Beam, \$4.95.



Oliver No. 513 Hillside, Steel-Beam Plow

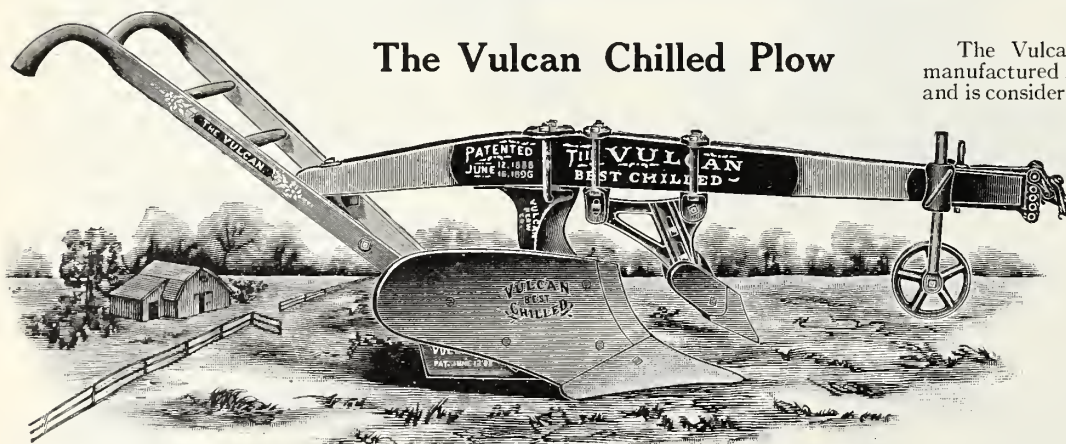
The illustration shows a new and very neat pattern of Hillside Plow, which possesses so many valuable features as to make it a leader of its class. Light in weight, light in draft and the shape and turning qualities are A-1. Bottoms are long, insuring steadiness and ease of handling. Capacity, 8 x 15 inches. Weight, 144 lbs. Price, Plain, \$25; Wheel, extra \$1.65; Jointer, extra \$3.30.

Prices of other Oliver Chilled Plows

	Beam	Hand	Capacity	Weight	Plain	Wheel Extra	Jointer Extra
No. BN	Wood	Right	5 x 10 in.	71 lbs.	\$10 75	\$1 65	\$3 60
No. 10N	Wood	Right	5½ x 11 in.	74 lbs.	14 50	1 65	3 60
No. E1N	Wood	Right or Left	7 x 14 in.	132 lbs.	21 50	2 50	3 85
No. 84	Steel	Right or Left	8 x 16 in.	141 lbs.	22 00	2 20	4 70
No. 153	Steel T. B.	Hillside	5 x 8 in.	70 lbs.	12 50	1 65	

SPECIAL CIRCULARS OF ANY OF ABOVE PLOWS MAILED ON REQUEST

The Vulcan Chilled Plow



The Vulcan Chilled Plow has been manufactured for more than a half century and is considered by many users as the best Chilled Plow manufactured.

Superior construction of the best material by competent mechanics is responsible for its strength, light draft and steady running. They are equipped with ribbed moldboards, which act as strengthening braces, and corrugated points, which it is claimed will outwear ordinary points and also hold a cutting edge a greater length of time.

	Beam	Hand	Capacity	Weight	Plain	Wheel Extra	Jointer Extra
No. 8	Wood	Right	5 x 8 in.	77 lbs.	\$11 25		
No. 13	Wood	Right or Left	8 x 13 in.	127 lbs.	19 75	\$1 75	\$5 00
No. 14	Wood	Right or Left	8 x 14 in.	135 lbs.	21 75	1 75	5 00
No. 13	Steel	Right or Left	8 x 13 in.	145 lbs.	19 75	1 75	6 00
No. 14	Steel	Right or Left	8 x 14 in.	155 lbs.	21 75	1 75	6 00
No. 10	Steel	Hillside	7 x 10 in.	112 lbs.	17 00	1 75	
No. 12	Steel	Hillside	8 x 12 in.	143 lbs.	23 50	1 75	6 00

Improved Fordson Tractor

A STURDY, RELIABLE, ECONOMICAL, AND POWERFUL TRACTOR

The improved Fordson Agricultural Tractor of today gives the farmer a Tractor with ample power to haul two 14-inch bottom plows, and delivers 30 H. P. at the belt, with the motor running at 1100 R. P. M.

The New Fordson is easily started, being equipped with the latest type magneto with impulse starter.

An improved lubrication system with a larger crank-case and oil-filter, new water-cooling system with pump, and powerful brake with ratchet for holding Tractor.

The front of the Tractor is mounted on a coil spring which acts as a shock-absorber. The front wheels are of the one-piece cast type. Heavy fenders and platform are standard equipment.

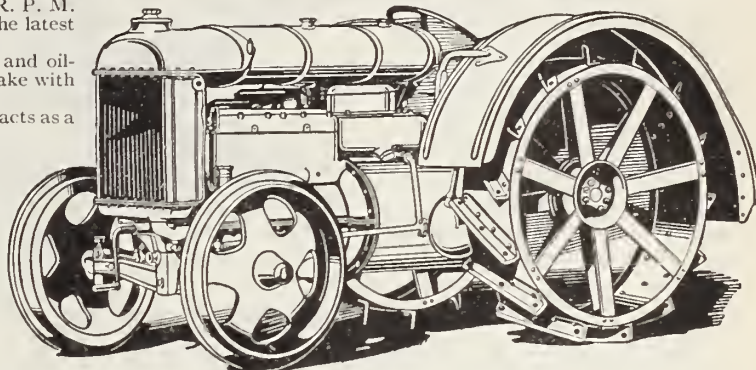
Rear wheels are equipped with removable cleats, allowing for spade-type lugs if preferred.

The Fordson is a powerful, compact, sturdily built Tractor, with the framework of single-unit construction, and all working mechanism enclosed.

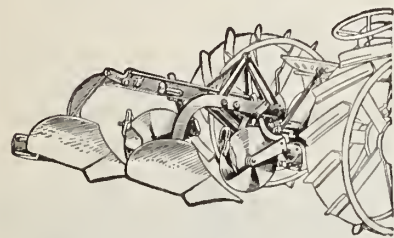
The latest centrifugal type of governor, and gear-shift belt-pulley is now used. This pulley can also be used on the previous model. Weight of tractor, approximately 3126 pounds.

Descriptive Circular and prices on request.

We carry repair parts for all models Fordson Tractors in stock.



The New Ferguson Plow *Adaptable to all plowing conditions*



The Ferguson, when attached to the Fordson, becomes part of the Tractor—a single integral unit. Because of this unit principle, and because of the revolutionary line of draft it secures penetration by pull instead of weight.

The Ferguson handles easily in small and irregularly shaped fields, and plows corners and tight places as well as the wide-open spaces. Quickly attached or detached, and is easily raised or lowered, with one hand, from the driver's seat. The Ferguson Plow can be used only with the Fordson Tractor. Made in three sizes:

16-inch. Single Bottom with combination rolling colters and jointers. Weight 265 lbs... \$88 00
12-in. Two Bottom with combination rolling colters and jointers. Weight 360 lbs..... 108 00
14-in. Two Bottom with combination rolling colters and jointers. Weight 360 lbs..... 108 00

DESCRIPTIVE CIRCULAR ON REQUEST

Wiard No. 32 Tractor Plow

**STRONG, DURABLE, LIGHT DRAFT, ADJUSTABLE WIDTH OF CUT
TWO BOTTOM OR SINGLE BOTTOM. MADE BY THE "OLDEST PLOW MAKERS IN AMERICA"**

The Wiard No. 32 Two Bottom Tractor Plow is shown at right with the regular equipment of combination rolling colters and jointers, pin break hitch, regular landsides, chilled moldboards and points. A landing lever attachment can be furnished to give more or less lead to the Plow on uneven ground, assuring that full furrow capacity is gained by each bottom.

The entire Plow is constructed with an idea to simplicity and the number of parts have been reduced to a minimum.

Ease of draft, smoothness of furrow and durability of Plow are unexcelled. There is a good easy turn to the moldboard but it puts the furrow over, covering all vegetation, manure, or trash of any kind. It has a capacity of from 5 to 8 inches deep.

The main frame of the Plow is so constructed as to give an amply high lift to the bottoms, getting them out of the way of ordinary obstructions. This frame is adjustable for 24 or 28-inch plowing by the removal of six bolts.

Operating levers are easily reached from the tractor seat. The depth and level of Plows may be instantly changed without removing both hands from steering wheel.

Plows are lifted by tractive power of the land wheel. This lift has been thoroughly tried and approved.

PRICES

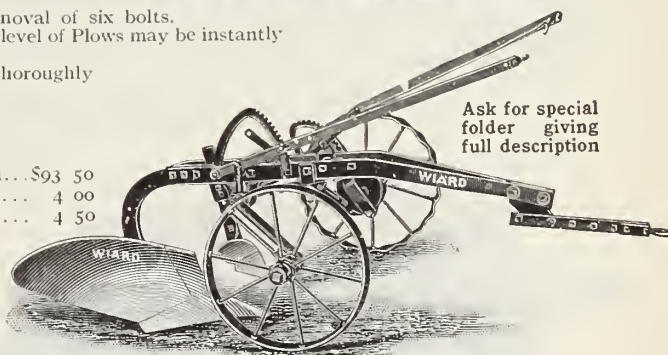
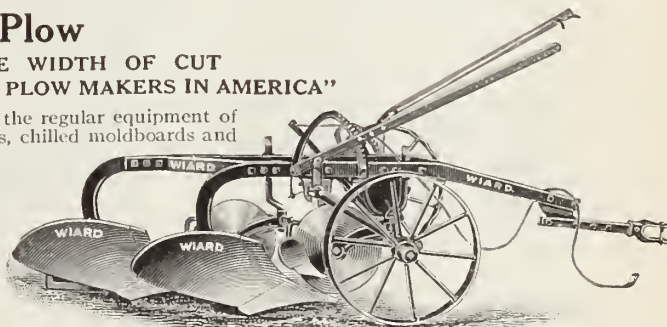
Two Bottom, 24 to 28-inch cut

With chilled bottoms, combination rolling colters and jointers, regular hitch... \$93 50
For steel moldboards instead of chilled, add..... 4 00
For jointers instead of combination rolling colters and jointers, deduct..... 4 50

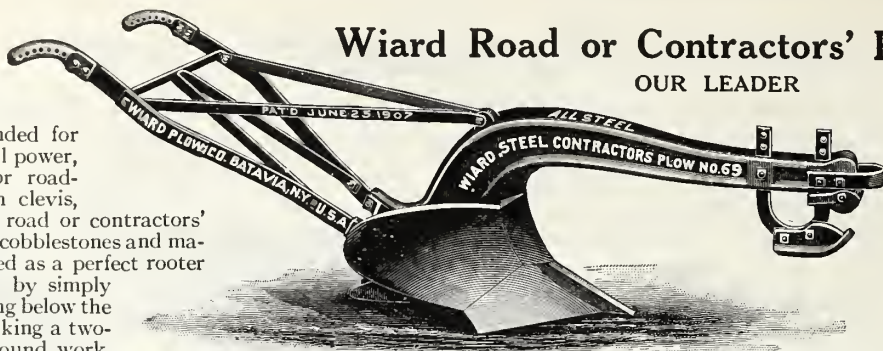
Single Bottom, 16 to 18-inch cut

The Single Bottom Plow is of the same rigid construction throughout as the Two Bottom Plow. It has lighter draft and will do more uniform work in hard ground and on hillside. Any light tractor will handle it at a faster plowing speed than a two Bottom Plow, and it will do nearly as much work. For deep plowing it has no equal.

With chilled bottoms, combination rolling colter and jointer, regular hitch..... \$80 00
For steel moldboards instead of chilled, add..... 2 00
For jointers instead of combination rolling colters and jointers, deduct..... 2 25
Spring trip-hitch and landing lever attachment..... 13 00



**Ask for special
folder giving
full description**



Wiard Road or Contractors' Plow No. 69

OUR LEADER

This Plow is intended for use with either animal power, a traction engine, or road-roller. Weight, with clevis, 315 pounds. For all road or contractors' work—for tearing up cobblestones and macadam—it can be used as a perfect rooter and pavement Plow by simply removing the steel wing below the moldboard—thus making a two-in-one Plow for all-round work. Ordinarily, the contractor has one Plow for general purpose or furrow work and another Plow for rooter work or tearing up old pavements. This No. 69 does the work of both and answers any and all purposes, means a less investment and keeping in stock extra parts for one Plow only.

Price, with shoe, and forged steel point, \$62

Wiard Road or Contractors' Plows Nos. 64 and 65

No. 64, with steel beam, is a light Plow intended for road-repair work. It has excellent turning qualities and will hang to the ground on a hard and difficult job. Weight, 160 pounds. Price, with shoe and forged steel point, \$38.

No. 65, with cast-iron beam, is a medium-weight Plow intended for general contracting work. Weight, 200 pounds. Price, with cast-iron point, \$30; with forged steel point, \$35. No. 65, with steel beam and forged steel point, \$48.50. (Shoe included at prices quoted.)

The Wiard Reversible or Two-Way Sulky Plow

This Sulky is adapted to all soils, leaves no ridges or dead furrows and does perfect work on either level land or side hill.

It is very simple, easy to handle and is lightly constructed, the material used being mostly steel and malleable iron, making it very strong and durable.

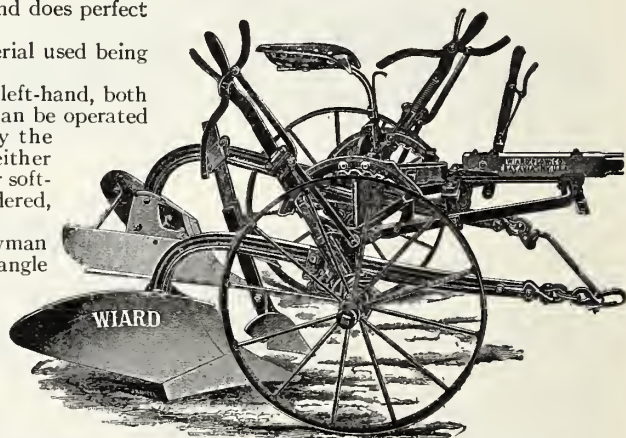
As shown in the illustration, there are two Plows, one right- and one left-hand, both operated by separate levers and having an automatic power lift which can be operated by the driver from the seat either by the use of a trip lever operated by the foot, or by a hand trip lever which can be operated by the driver either when riding or walking. The Plows have the highest grade chilled iron or soft-center steel moldboards, and either forged steel or cast-iron points as ordered, and can be fitted with jointer or plain colter, as desired.

The Pole Shifter is operated by a hand lever, which enables the plowman while riding or walking to shift the pole either to the right or left at any angle desired, to suit the team and get the proper width of furrow, either on flat land or side hill, without side draft.

The Automatic (Power Lift) Foot Trip operates as follows: The Plow is lifted from the furrow by the team while in motion, by pressure of the foot on the trip lever, until the Plow begins to lift and the lever moves forward, which will then release and lock itself in place. The lift can also be operated by hand by the driver, either from the seat when riding or when walking behind. It unlocks by pressure of the foot on the foot trip or by hand by pressure of the upper rear handle of dog, lowering the Plow.

The Sulky is perfectly balanced so that whether the operator is on the seat or following the Plow there is absolutely no weight on the horses' necks. The seat can be adjusted so as to allow it to be leveled when plowing on side hill, throwing the weight of the operator towards the upper wheel, giving comfort and ease to the driver.

The Double Sulky can be fitted with the following bottoms:



Nos. 43 right and 103 left. Cuts 4 to 7 in. deep, 9 to 13 in. wide. With chilled or steel molds. Nos. 44 right and 104 left. Cuts 5 to 8 in. deep, 11 to 15 in. wide. With chilled or steel molds. No. 400. Two- or three-horse. Weight, 550 lbs. Complete with chilled moldboards, jointers, or plain colters, cast-iron points, two- and three-horse hitch, \$105; fitted with steel moldboards, \$4 extra; fitted with forged steel points, \$8 extra. Ask for Special Circular.

Columbus Steel Drag Scraper

The most economical tool made for making and mending roads. The Columbus is the highest type of Drag Scraper made. The bowls are stamped from a single sheet of extra hard steel plate and are of seamless construction throughout. The round-top handles are a distinguishing feature. The bails are of steel and of improved pattern, with strong and perfectly working swivels.

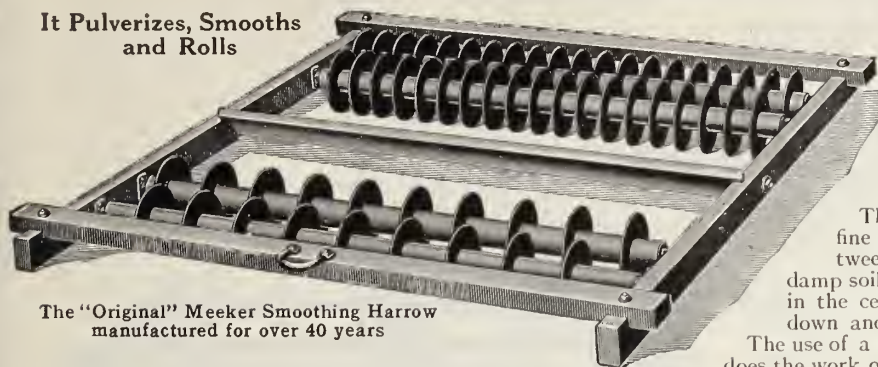
No. 1. Approximate capacity 7 cubic feet. Size of bowl: length over all 32½ inches; width 33 inches; greatest depth, 10½ inches; weight, 105 pounds. With runners, \$8.25.

No. 2. Approximate capacity 5 cubic feet. Size of bowl: length over all 30½ inches; width 29½ inches; greatest depth 10½ inches; weight 95 pounds. With runners, \$8.



Meeker Smoothing Harrow

It Pulverizes, Smooths
and Rolls



The "Original" Meeker Smoothing Harrow
manufactured for over 40 years

MAKES THE HEAVIEST SOIL FINE AND SMOOTH

The Meeker Smoothing Harrow is a perfect pulverizing and smoothing Harrow and land-roller combined.

As the illustration shows, it has four sets of rollers containing 46, 58 or 82 discs, depending upon the size, the discs being set so as to overlap or meet.

These discs grind up all lumps, leaving the soil fine and smooth. The discs of one roller work between those of the other. This prevents clogging in damp soil and makes the seed-bed very fine. The board in the center, set at an angle, can be adjusted up and down and serves as a leveler.

The use of a Meeker Harrow saves the work of raking, and does the work of a dozen men. As one experienced farmer re-

marks in telling how he prepared an onion bed, "once lengthwise and once crosswise will usually fit a field in better shape than many times over with any other tool." After the Meeker Harrow has gone over the land it looks as if a garden rake had been used.

Every farmer who has one or more acres of fine seed under cultivation needs a Harrow that eliminates hand-raking—one that makes the soil as fine as dust. No matter what kind of soil it is the Meeker Harrow prepares it perfectly for fine seeding—a perfection that no other implement approaches.

PRICES

4-ft. 6-in. x 4-ft. Harrow, with 46 8-in. discs.....	\$25 00	6-ft. 8-in. x 6-ft. Harrow, with 58 10-in. discs.....	\$34 00
4-ft. 6-in. x 4-ft. Harrow, with 46 10-in. discs.....	26 50	8-ft. x 6-ft. Harrow, with 82 8-in. discs.....	39 00
6-ft. 8-in. x 6-ft. Harrow, with 58 8-in. discs.....	28 00	8-ft. x 6-ft. Harrow, with 82 10-in. discs.....	44 50

Also a very valuable implement for use on golf-courses.

ASK FOR SPECIAL CIRCULAR

"Acme" Colter Harrow

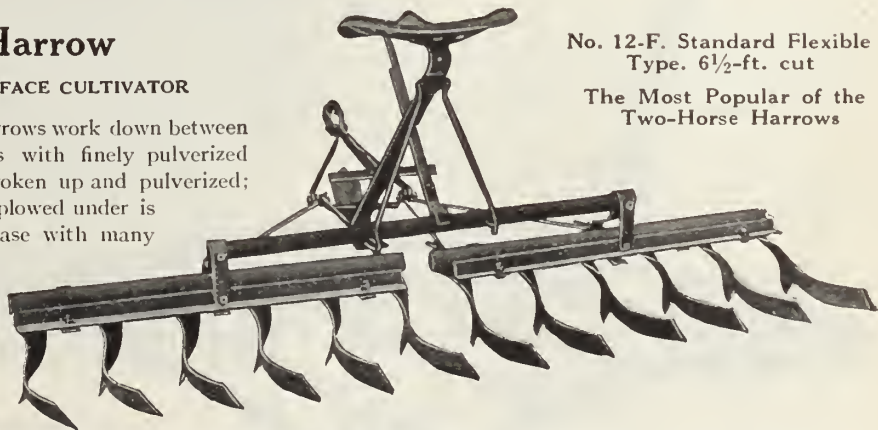
A PULVERIZING HARROW AND SURFACE CULTIVATOR

The colters on "Acme" Pulverizing Harrows work down between the furrow slices, filling the air-spaces with finely pulverized soil—lumps and clods are thoroughly broken up and pulverized; trash or stubble that has been carefully plowed under is not dragged to the surface as is the case with many other types of Harrows but is left beneath the surface where it rapidly rots and adds humus to the soil. Just the Harrow to help destroy corn borers since the colters work the plowed-under stubble, sod, etc., along with the borers, deep into the plowed depth and the corn borers will be destroyed by natural enemies before they can get back to the surface. The seed-bed prepared by the "Acme" Harrow is well compacted so that the seed will germinate rapidly; the surface is finely mulched so that the moisture is conserved.

Everything a Harrow ought to do, the "Acme" does. It cuts, crushes, levels, turns, smooths all in one operation, thus completely fitting the seed-bed for the seed. We have records of colters in use twelve years before being replaced with new ones. The frame of the Harrow will last indefinitely, and after the colters have been worn out new ones can be procured which will give you a Harrow just as good as when it originally left the factory.

In addition to flexible frame, Type F Harrows we offer Harrows of rigid-frame construction like Nos. 6, 8, 12 priced below.

We have sold the "Acme" Harrow for many years and customers who have worn out their second Harrow tell us that the "Acme" is an ideal Harrow for preparing the ground for the seed.



No. 12-F. Standard Flexible
Type. 6½-ft. cut

The Most Popular of the
Two-Horse Harrows

No.	Weight	Width	Description	Standard Type
*6	77 lbs.	3 ft.	1 horse, 1 section, 6 colters	\$16 00
*8	94 lbs.	4 ft. 4 in.	1 horse, 1 section, 8 colters	22 25
*12	112 lbs.	6 ft. 6 in.	2 horse, 1 section, 12 colters	25 00
12-F	124 lbs.	6 ft. 6 in.	2 horse, 2 section, 12 colters	29 00
16-F	151 lbs.	8 ft. 6 in.	2 horse, 2 section, 16 colters	35 00

* Rigid Frame.

Prices upon other horse-drawn sizes, also Tractor sizes, quoted on request

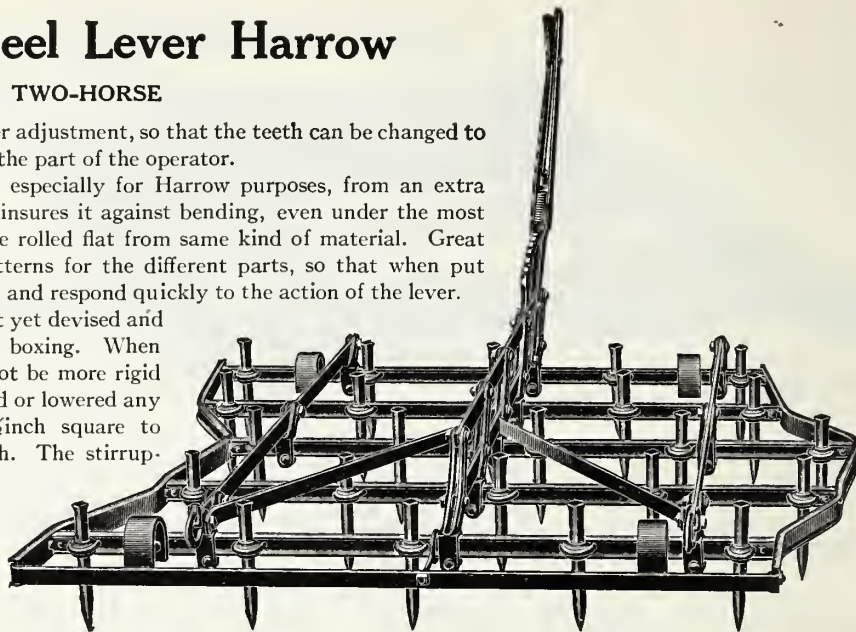
"Columbian" Steel Lever Harrow

ONE- AND TWO-HORSE

The Columbian Harrow is made with lever adjustment, so that the teeth can be changed to any slope quickly and with little exertion on the part of the operator.

The main-bars are U-shaped, and made especially for Harrow purposes, from an extra quality of steel, very high in carbon, which insures it against bending, even under the most severe strain. The cross-bars and braces are rolled flat from same kind of material. Great pains have been taken in preparing the patterns for the different parts, so that when put together they will be free from "lost motion," and respond quickly to the action of the lever.

The tooth-clamp is without doubt the best yet devised and consists of stirrup bolt and back and front boxing. When fastened with this device, the teeth would not be more rigid if a part of the bar itself. Teeth can be raised or lowered any distance, and any size can be used, from $\frac{1}{2}$ inch square to $\frac{3}{8}$ inch square. Furnished with $\frac{5}{16}$ -inch teeth. The stirrup-bolt clamp is fixed to take the common stock teeth carried by all dealers. It is securely braced and nicely finished. One-horse, with 25 teeth, one section, \$12.50; two-horse, with 50 teeth, two sections, \$21.50; two-horse, with 60 teeth, two sections, \$23.50.

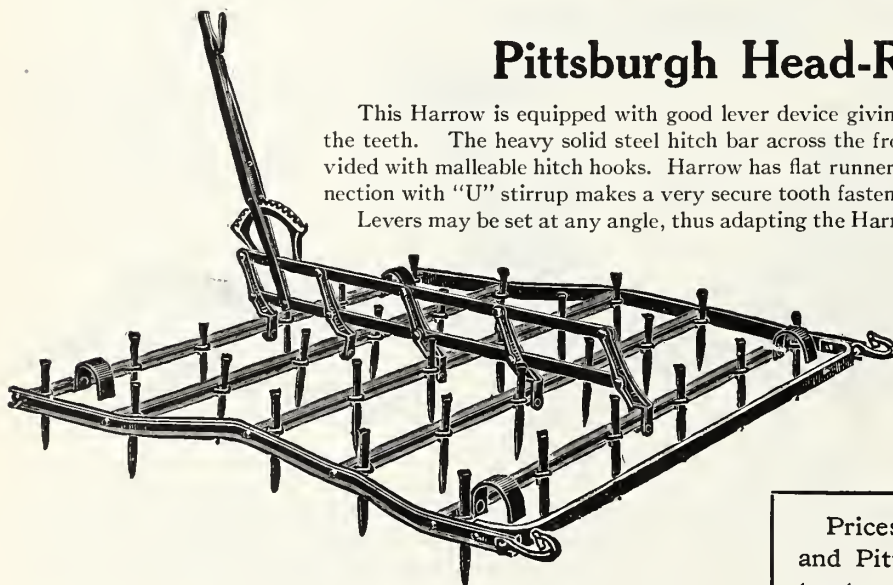


Showing 25-Tooth Section of Harrow

Pittsburgh Head-Rail Harrow

This Harrow is equipped with good lever device giving instant adjustment and desired slant to the teeth. The heavy solid steel hitch bar across the front braces the Harrow securely and is provided with malleable hitch hooks. Harrow has flat runners, and the close-fitting back boxing in connection with "U" stirrup makes a very secure tooth fastening.

Levers may be set at any angle, thus adapting the Harrow to general purpose work or for finishing and smoothing operations. It will also answer the purpose of a weeder for the first cultivation of corn and potatoes. Furnished with $\frac{5}{16}$ -inch teeth. One-horse, with 25 teeth, one section, \$11; two-horse, with 50 teeth, two sections, \$18.50; two-horse, with 60 teeth, two sections, \$20.



Showing 30-Tooth Section of Harrow

Prices on larger sizes of Columbian and Pittsburgh Head-Rail Harrows for tractor use will be quoted on request.

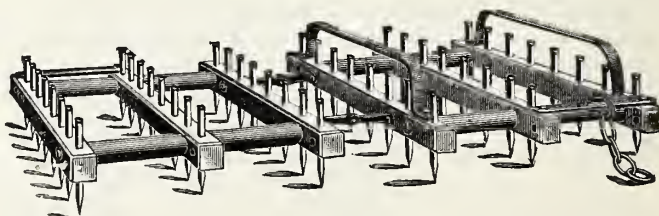
Malta Spike-Tooth Harrow

The Malta Wood-Frame Harrows are built of the very best materials throughout.

The wood work is of the best quality and of thoroughly seasoned white oak. The frames are closely jointed, and made secure and solid by steel rods passing entirely through them. All tooth bars are riveted at each end.

The hinges work free, allowing Harrow to adapt itself to uneven ground. Runners and teeth are of the best quality steel.

On account of being better made and better finished than other Harrows of this style on the market, they are having the preference. One-horse, with 32 teeth, one section, with runners, \$9.50; two-horse, with 48 teeth, two sections, like above cut, \$15.



Iron City Pipe Bar Lever Harrow

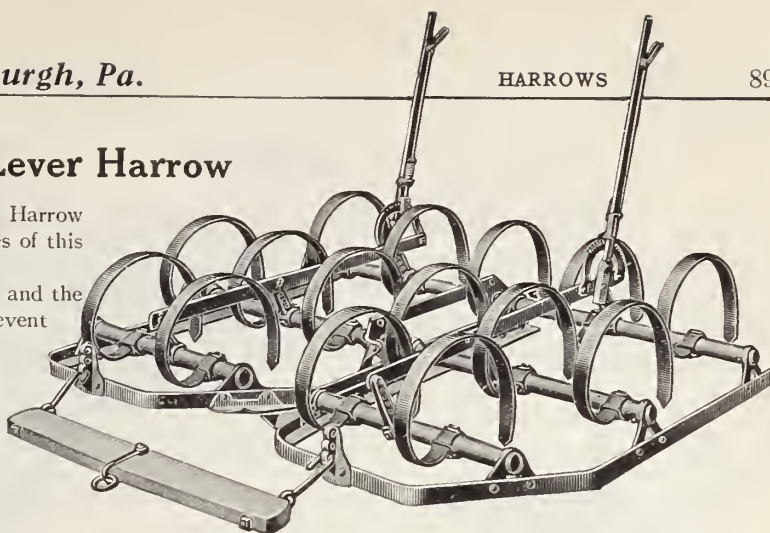
The Iron City Spring-Tooth Steel-Frame Lever Harrow shown here represents one of the most popular types of this class of Harrows.

The Iron City has angle steel frame, runner style, and the front of the Harrow is constructed with a view to prevent the gathering of trash.

Renewable steel shoes are bolted to the under side of all frame angles, and can be replaced at moderate expense.

The tooth bars are steel pipe, to which the teeth are bolted and held securely with the assistance of spanner clips.

All teeth are carefully tested before shipment and are guaranteed against defects. Two-section, with 15 teeth, weight 225 lbs., \$22; two-section, with 17 teeth, weight 240 lbs., \$23.50. Prices on three- or four-section Harrows will be quoted on request.



Pittsburgh Perry Wood-Frame Harrow

Steel Lined, Guarded, Protected Bolt Heads,
Perfect Tooth Seat, Adjustable Hitch

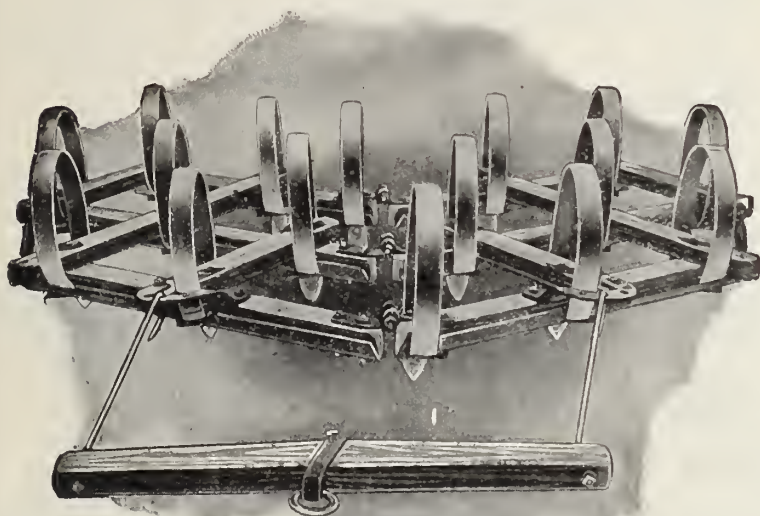
THE BEST OF THE "WOOD FRAMES"

The best Wood-Frame Harrow on the market. Beams full 3 inches; linings $\frac{1}{8}$ -inch angle steel; bolts $\frac{3}{8}$ -inch; teeth are full length and weight, tempered in oil and fully warranted; our tooth fasteners are channel steel. Steel braces support and strengthen the outer end of the Harrow.

These Harrows are well made of best oak and hinged properly so that they will not buckle in the middle, but ride evenly, pulling all teeth in the ground at about an even depth.

Teeth are made from open-hearth, high-carbon spring steel, oil-tempered and tested.

Price, with 16 teeth, weight 191 lbs., \$19; with 18 teeth, weight 209 lbs., \$20.



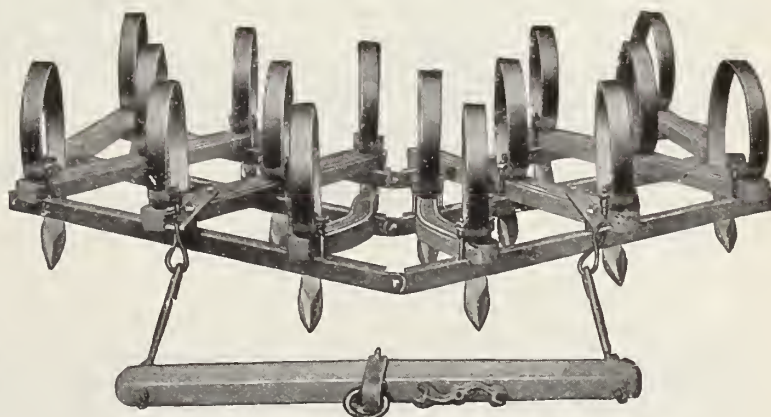
Pittsburgh Combination Harrow

The illustration tells the story—a strong, simple, and efficient Harrow.

Beams. The under side of the Pittsburgh Combination Harrow is constructed of high-carbon angle steel beams, and the upper side of best oak beams, so there is no wear against the wood parts.

Teeth. Best spring steel, formed so that the pitch can be changed to suit the operator. They fasten on top of the frame and the bolt heads are protected so they will not wear off. Malleable Iron Tooth Clips and $\frac{3}{8}$ -inch bolts.

Stump guards (or braces) placed to protect the frame and make it perfectly rigid. With 16 teeth, weight 161 lbs., \$19; with 18 teeth, weight 174 lbs., \$20.

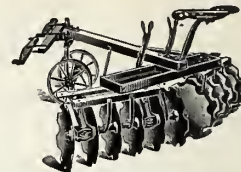
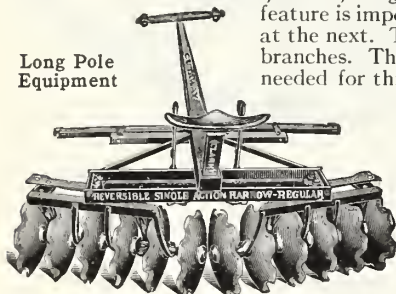


Clark
"CUTAWAY"

Reversible Single-Action Harrow

Practical simplicity is the keynote in the design of the Clark "Cutaway" Single-Action Harrow. The head is built directly on top of the gangs, with the tongue, seat, braces, and levers all fastened to it, thereby making the discs carry the entire weight of the machine. This construction gives such perfect balance that there is practically no weight on the horses' necks, and makes the use of a tongue truck optional with the user. Without a tongue truck the hitch is placed back close to the machine and the draft is the very minimum. The "Cutaway" Single-Action Harrow is reversible, that is, the gangs can be swung end for end, so that the soil may be thrown either out or in. This reversible feature is important to the orchardist. He can throw the soil toward his trees at one cultivation and away at the next. The Single-Action Harrow Extension enables the orchardist to cultivate under low-spreading branches. The Extension Head Harrow can also be closed up for regular field-work, no extra parts being needed for this. Sizes up to 14 feet wide. Write for special circular.

Long Pole
Equipment



Tongue Truck Equipment

REGULAR HEAD

Size	Hitch	Width cut	Weight	Price
A-5.	10 16-in. discs, 2-horse, 5 ft.	290 lbs.	.....	\$44 50
A-6.	12 16-in. discs, 3-horse, 6 ft.	340 lbs.	.....	50 00
X-5.	10 18-in. discs, 2-horse, 5 ft.	345 lbs.	.....	48 50
X-6.	12 18-in. discs, 3-horse, 6 ft.	425 lbs.	.....	55 00

EXTENSION HEAD

Width cut	Weight	Price
7 ft.	315 lbs.	.....\$46 50
8 ft.	390 lbs.	.....53 50
7 ft.	380 lbs.	.....51 50
8 ft.	455 lbs.	.....58 50

If Tongue Truck is wanted instead of the Long Pole, add \$7 to above prices.
If both Tongue Truck and Long Pole are wanted, add \$9 to above prices.

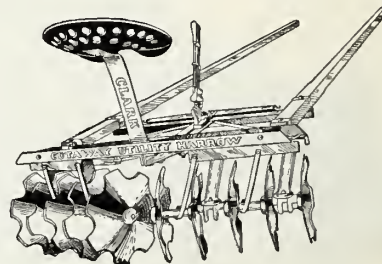
Clark
"CUTAWAY"

Utility One-Horse Harrow

Many farmers need a One-horse Disc Harrow and go without it simply because they cannot find a machine that is fit to use with one horse—most of them are too heavy. The Utility Harrow is one of the five special One-horse Clark "Cutaway" Disc Harrows built expressly to meet one-horse requirements.

The Utility Harrow is ideal for the nurseryman, market-gardener, florist, or general farmer; it is suitable for cultivating small fruit trees, for cultivating berries or for preparing seed-beds. While light and easy to handle, it is very strong and does a good job.

Frame is of angle steel; gangs are reversible; 10 14-inch cutlery steel, forged-edge discs (cutout or solid same price) cutting 4 feet wide. Weight 200 pounds. Price \$33.50.



Clark
"CUTAWAY"

Double-Action Disc Harrows

This machine is built with all four gangs attached to *one unit main frame* which holds the rear discs so they cut and pulverize the soil between the furrows cut by the front discs. All the soil over which the machine passes is thoroughly worked and the surface left level. This Clark "Cutaway" Double-Action Harrow constantly works at leveling the ground, cutting down the high places, filling in the hollows, leaving a seed-bed in both places.

The Clark "Cutaway" Double-Action Harrow is well known for its light draft. It is built very compact, so the distance from the hitch to the rear end of the machine is about one-half the length of the load in tandem or trailing-type Harrows. There is no tongue truck as there is absolutely no use for it. This further helps reduce draft and also saves expense.

The discs are the well-known Clark "Cutaway" forged-edge cutlery steel discs. Either cutout or solid discs will be furnished at the same price; cutout discs are supplied unless the other is specified. Bearings are the famous Clark hardwood oil-soaked bearings.

The jointed pole prevents neck weight and may be removed in one minute, making it possible to use the Harrow either as a tongueless or a tongue machine.

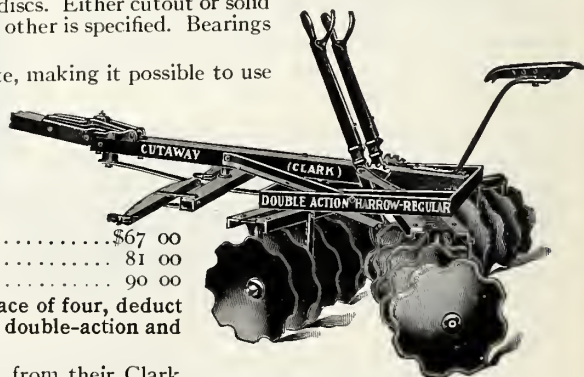
The levers are convenient to the driver's seat, which is placed at the rear where it should be. Each lever controls a set of front and rear gangs.

SIZES AND SPECIFICATIONS

Size	Hitch	Width cut	Weight	Price
A-4.	16 16-in. discs, 2-horse, 4½ ft.	440 lbs.	.....	\$67 00
A-5.	20 16-in. discs, 3-horse, 5½ ft.	555 lbs.	.....	81 00
A-6.	24 16-in. discs, 4-horse, 6½ ft.	630 lbs.	.....	90 00

If two-horse hitch is wanted in place of three, or three-horse hitch in place of four, deduct \$1 from the above prices. Descriptive catalogue and prices on other sizes of double-action and reversible single-action Harrows mailed on request.

Letters from farmers who have received twenty years' service, and more, from their Clark "Cutaway" Harrows testify to the long life and satisfactory results given by these good Harrows. These Harrows are well known for their light draft as well as for the amount and quality of work they do.





CUTOOT or SOLID DISCS
Furnished at the same price, or any combination of the two.

Farmers who want a genuine Clark "Cutaway" Disc Harrow but prefer the flexible type are very enthusiastic about this Harrow. There is a special line of Heavy Service Tractor Harrows for extreme conditions and extra heavy tractors. Folder sent on request.

Clark "Cutaway" Harrows have been continuously manufactured for more than 50 years. They are the best that can be produced both in design and construction.

Flexible DOUBLE-ACTION TRACTOR HARROW

The Clark "Cutaway" Flexible Tractor Harrow gives all the flexibility that can be desired and at the same time retains many of the valuable and exclusive Clark "Cutaway" features. This is an unusually sturdy Harrow with its heavy angle-steel and channel-steel frame construction. All four gangs are angled by a powerful crank and screw control. The rear section can be quickly removed by taking out three bolts and the front section of the Harrow used alone if desired.

SIZES AND SPECIFICATIONS

Size	No. of Discs	Diam. of Discs	Width of Cut	Weight	Price
A-6.	24	16 in.	6½ ft.	755 lbs. . .	\$102 00
A-7.	28	16 in.	7½ ft.	860 lbs. . .	109 00
X-5.	20	18 in.	5½ ft.	695 lbs. . .	99 00
X-6.	24	18 in.	6½ ft.	850 lbs. . .	110 00
X-7.	28	18 in.	7½ ft.	950 lbs. . .	120 00



Wonder Disker

The All-Purpose Disk

For subduing and reclaiming virgin brush-land, bog-land, cleared woodland, drained swamps, etc.

For thorough and economical orchard cultivation, including sod-breaking and disking in cover crops.

For renovating old pastures.

For disking heavy stubble.

For road-building, golf-course construction, subdivision development, and other contractors' jobs.

The Wonder Disker takes the place of the Clark "Cutaway" Bush and Bog Plow and Harrow which has been popular for more than thirty years. The Wonder Disker has many improvements, such as low-down construction, flexible frame, weight-carriers mounted at the rear, etc. The draw-arms are of spring steel.

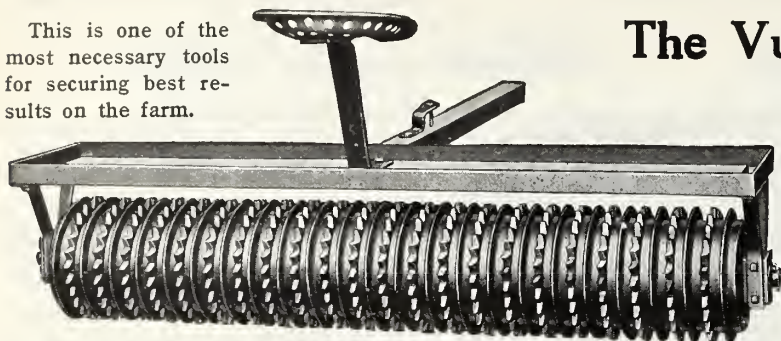
Bear in mind that the Clark "Cutaway" Wonder Disker is reversible, that is, the gangs can be reversed to throw the soil toward the center. This reversible feature is absolutely essential for orchard work.

The Wonder Disker has 8 24-inch disks, spaced 9 inches apart. It cuts 6 feet wide and weighs 700 pounds. The forged-edge disks of cutlery steel are guaranteed three years against breaking and cracking. A 10-20 tractor can easily handle this implement on all kinds of work. Price \$108.



It is now more than fifty years since George M. Clark made the first "Cutaway" Harrow. From that time the standards of usefulness and quality which he originated have been consistently maintained. Clark's "Cutaway" Implements are today examples of the best which can be produced in that line of tools, in regard to both design and construction. They carry all of the most improved features which have been developed and shown to be of value to the farmer. It will be recalled that most of the essential features in disk implements today were originated by Mr. Clark.

This is one of the most necessary tools for securing best results on the farm.



The Vulcan Disc and Sprocket Roller Pulverizer

To grow crops successfully, it is necessary to retain moisture in the ground; to accomplish this the top soil must be kept from crusting, and this can be done thoroughly and easily by using a Vulcan Sprocket Pulverizer.

The sprocket or spike-rings break the clods, and together with the solid discs, pulverize and pack the soil and prevent rapid evaporation.

For planting corn, this machine will prepare a better seed-bed than can be completed in any other

way. It levels and pulverizes the soil and leaves the top packed firmly with fine mulch in perfect condition for receiving the seed. Also, in preparing a seed-bed for alfalfa or other grain, it cannot be surpassed, and it is exactly suited for breaking the crust which forms on winter wheat. For rolling corn, we supply spacing collars so that some discs can be removed and the remainder held at the proper width.

Upon the Vulcan Sprocket Pulverizer, frame-bars and axles are heavy and amply strong enough to allow the use of weights necessary to do good work.

The tongue is not bolted across top of the frame, therefore, weight-pan is left unobstructed, making it possible to use rails or other long weights.

End brackets are in one piece, giving rigid connection. End bearings are made of maple, soaked in oil, and are reversible, therefore, will give long service.

The Vulcan Sprocket Pulverizer and Packer is strongly constructed throughout and will give you long and satisfactory service. It is made in the following sizes:

8-ft., Single Section. 920 lbs.....	\$57 50	15-ft., Three-Section. 1,815 lbs.....	\$115 00
10-ft., Single Section. 1,028 lbs.....	72 00	Doubletrees and Neckyoke extra	3 50
11-ft., Three-Section. 1,328 lbs.....	88 50		

Special circular on request

Buch's Double Gang Disc Pulverizer

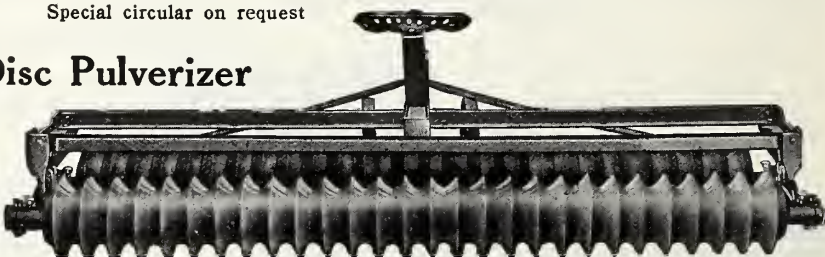
This tool has two gangs of iron discs which crush and cut lumps, pack out all air-spaces, and level the surface of the field, all in one operation.

The discs of the back gang come between those of the front gang so that no lumps are missed. This Pulverizer, with a harrow for bringing up the lumps to the top will make a perfect seed-bed in any soil. The discs of the front gang build up a set of ridges and the back gang, coming half way between, splits and works these ridges over, thus stirring the soil.

PRICES:

8 ft.—21 front discs 15 in. diam., 22 rear 12 in.; weight 1,000 lbs. \$70.
Fore carriage instead of long pole, extra \$7.50. Doubletrees and Neckyoke, extra \$3.

Prices on other sizes quoted on request



Prices on larger and smaller sizes quoted on request.

Pittsburgh Steel Land Roller

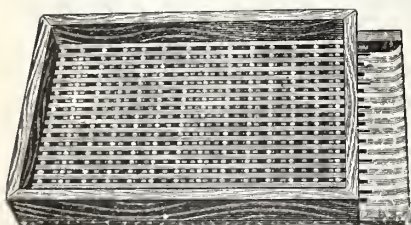
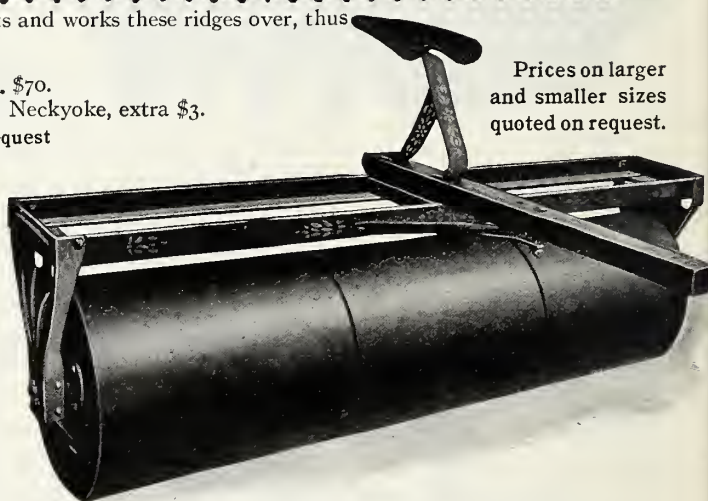
Drums or rolls are made of heavy, 12-gauge high carbon steel, with pressed steel ends, and will not dent.

Axles are 1 5/8 inches in diameter; angles 2 1/2 x 2 1/2 x 1/4 inches.

Hangers are of 2 x 3/8 inches high carbon steel, with heavy cast tops, and regularly furnished with oil-soaked wood boxings.

The frame is constructed so that it may be used as a weight-box should additional weight be required.

Pole sets on top of frame, thus enabling us to use shorter and more rigid hangers. The hitch is underneath the tongue, reducing the draft and neck weight to a minimum. 8-foot, 3 section, 24 inches in diameter. Weight 535 pounds, \$38.50. Doubletrees and Neckyoke, extra \$3.



Capacity: 6 to 10 bushels per hour.
Size 12 x 19 inches
Price, \$1, postpaid, \$1.15

Perfection Corn-Grader

A seed Corn-Grader has become a necessity in getting a uniform stand of corn. No planter will drop uniformly unless the seed is graded. Graded seed insures perfect dropping, stronger plants and increases the yield 5 to 15 bushels per acre.

There are four grades of corn on every ear. (1) The small kernels; (2) the large, odd-shaped kernels; (3) the broad kernels too thin for good seed; (4) the even-sized perfect kernels.

This Grader sorts them out in one simple operation. It has a special lower screen construction by which it gets four grades of corn. It has a guard on the lower screen to prevent the spilling of the corn while grading, and to enable all of the screen to act on the corn at once, thus making rapid work.

Dunham Water-Weight Lawn Roller

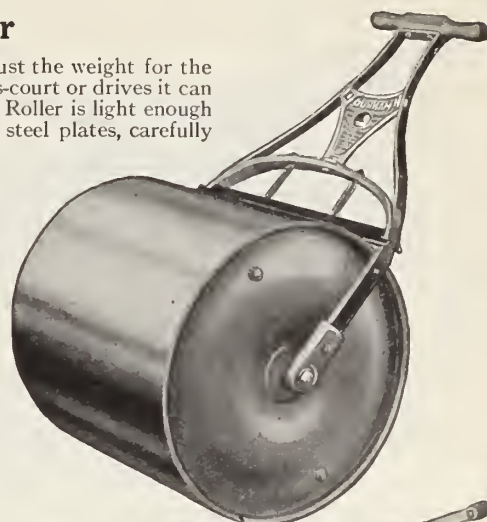
This Roller has a steel drum into which water can be poured until the Roller is just the weight for the work at hand. For soft lawns it will not need so much water, while for firm turf, tennis-court or drives it can be made as heavy as desired. When through rolling, all water is emptied out and the Roller is light enough to be easily handled and put in the basement or garage. The drum is made of heavy steel plates, carefully welded to form a solid one-piece container for the water.

	Diameter inches	Width inches	Sec- tions	Weight empty	Weight filled with water	Price
No. 1	14	15	I	45 lbs.	115 lbs.	\$9 75
No. 5	18	24	I	85 lbs.	265 lbs.	15 50
No. 7	24	24	I	110 lbs.	420 lbs.	18 00
No. 9	24	32	I	130 lbs.	565 lbs.	20 00
No. 2	14	24	I	60 lbs.	175 lbs.	10 50
No. 4	18	24	I	82 lbs.	265 lbs.	12 50

Nos. 5, 7, and 9 have roller bearings and handle brace as shown in cut.

Nos. 1, 2, and 4 have plain bearings without arched brace between handles.

Prices on Horse- and Tractor-drawn Rollers, also Fairway Rollers quoted on request



Thompson Fertilizer Spreaders

The messiness and uncertain results of hand sowings of fertilizer, plant foods, and grass seed can now be eliminated by the use of the Thompson Fertilizer Spreaders. They spread rapidly and evenly over the ground at any desired rate. Hopper is made of galvanized sheet steel. Rotary agitator insures free flowing of material. Strongly constructed throughout. Shut off control operated from handle.

Made in three sizes:

	Spreading width	Capacity	Price
Junior.	14 in.	1 1/2 pk.....	\$5 95
Standard.	24 in.	3 1/4 bus.....	10 45
Special.	36 in.	1 1/2 bus.....	16 25



Spike Disc Lawn and Green Cultivator

Lawns and putting greens require cultivation the same as your flower-garden or other crops. The Spike Disc is the ideal tool for making, improving and saving the lawn, greens and fairway, baseball diamonds, playgrounds, parks, etc. Its high carbon alloy steel saw teeth cultivate and aerate in one operation—thus eliminating the hard-baked surface and forming a mulch so necessary for retaining moisture. Use the Spike Disc frequently, not only for cultivating but reseeding, fertilizing and top dressing. By immediately sprinkling

lightly after the above operation, the seed and fertilizer are settled in the perforations and not washed or blown away.

Rolling width, 18 inches. Weight, 90 pounds. Has 19 Discs, each 9 1/2 in. diameter. Price with one handle \$25, with two handles for two-man operation \$30. Circular and price of horse- and tractor-drawn outfits on request.



This illustrates interior of
Big 4 Model B

Big 4 Lime and Fertilizer Sower

This is an efficient and strongly built Lime and Fertilizer Sower. Can handle any fertilizer fine enough to pass through the 1/2-inch-mesh screen in each hopper in amounts ranging from 400 to 6,000 pounds per acre.

The Improved Rotary Wing Feed forces the lime evenly through feed-spaces at bottom of the Sower. The two feed-shafts are controlled by a lever which throws either side out as may be required, and gauge on rear of hopper shows amount of material sown. Low steel wheels keep the Sower close to the ground. Special throw-out device is handy when going to and from the field. This Sower is built in standard 8-foot size, with 10-bushel capacity.

Model A, with Single Agitator. Weight 425 lbs.\$58 50 | Model B, with Double Agitator. Weight 510 lbs.\$72 50

Hallock Walking Weeder

No successful farmer of today considers that his outfit of modern tools is complete unless he has a Weeder. The experience of the last few years has satisfied all users of this tool that it is one of the most important on the farm, and is an absolute necessity for best results. In its operation it works over and among the plants without injury, destroys all the small weeds, breaks up the crust, mellows the ground, and in this way puts the plants in best possible condition for rapid growth. The Weeder is substantially built from the best of materials. The teeth are located in three rows, and they are made of high quality steel all properly shaped for best work. Equipped with runners for transporting to and from the field. Made in two sizes.

8-foot, with 39 teeth. Weight 90 lbs.....\$12 00
9-foot, with 45 teeth. Weight 100 lbs..... 13 50

Farquhar Riding Weeder

**KILLS WEEDS • CONSERVES MOISTURE
STIMULATES PLANT-GROWTH**

This is the most profitable implement on the farm. Kills small weeds close around the plants at a time when the weeds are easy to kill and when the tender plants need all the sunshine and air available.

The Weeder may be used immediately after planting, keeping the surface of the soil loose and friable and at the same time destroying the weed seeds as they germinate.

Cultivation with the Weeder prevents the ground from "baking" or forming a hard crust. For this reason the use of the Weeder prevents plant-retardation, and by reason of the loose, friable soil, plant-growth is stimulated.

The Farquhar Riding Weeder has distinctive features which commend it to progressive farmers: The angle-iron frame is strongly built; the 30-inch wheels are mounted on a steel axle with adjustable axle braces which prevent springing or bending of axle when wheels are widest spread. These braces are fastened to set collars on inside of wheels and are adjusted with a set screw, permitting a wheel-spread from 46 to 60 inches, straddling one or two rows when spaced from 30 to 42 inches apart.

There are 63 teeth of high carbon steel and goose-neck shape.

The tooth-bars are balanced on the tongue instead of on the lifting lever, which is not only more convenient and easier to operate with an even balance, but assures a more even and uniform cultivation.

The Grass Seed Attachment, supported by a steel frame and the tongue, sows in front of the teeth and is driven from the sprocket on the ground wheel. Quantity ranges from 4 to 20 quarts per acre. Width 12 feet. Price \$41.50. Standard Neck-Yoke and Evener \$3.25. Grass Seed Attachment, extra if wanted, \$18.



Farquhar "Non-Wrap" Manure Spreader

**Positively No Wrapping
or Beaters**

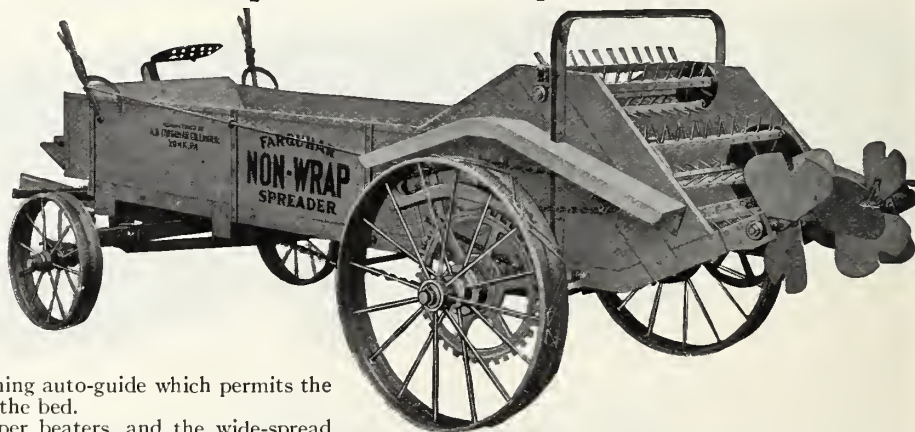
**EASY TO LOAD • LIGHT DRAFT
EVEN DISTRIBUTION
EASY RUNNING**

Farquhar patented "Non-Wrap" Spreader does more work, does it better, and produces greatest returns. Patented oscillating tooth-bars overcome the difficulty of wrapping around the beaters. The frame is all steel, strong and rigid, and the main channels run the entire length of the Spreader.

Front truck is equipped with short-turning auto-guide which permits the front wheels to turn at right angles to the bed.

The rear drive wheels, lower and upper beaters, and the wide-spread distributor are equipped with roller bearings which reduce the friction and greatly lessen the draft.

Farquhar Spreaders are supplied throughout with the Alemite Oiling System. Grease-gun is furnished with each Spreader.



Capacity, 60 to 75 bushels; feed-range, 4 to 24 loads per acre. Price, with 2-horse Hitch or Tractor Hitch, \$182.50. Brake extra, if wanted, \$6.50.

FARQUHAR MODEL 10 SPREADER (Not illustrated)

This Spreader is in every particular the same as the Farquhar "Non-Wrap" except it does not have the "Non-Wrap" oscillating beater bars. Price \$165. Ask for special bulletin giving detailed description.

Moline-Monitor Fertilizer Grain Drills

Moline-Monitor Double Disc Drills save seed, increase the yield, and improve the grade of all grain crops. This has been demonstrated by many agricultural colleges and by thousands of farmers.

The Moline-Monitor is the original double disc. It deposits the seed at a uniform depth in the bottom of a wide, compact furrow with the downward turn of the discs. This insures even seeding and even growing.

Forms Wide, Compact Furrows

The two discs which are beveled on the outer edges, come tight together at the front lower quarter, forming a knife or wedge edge. As the machine is drawn forward, the discs first cut the soil the same as a rolling coultter on a plow and then wedge or split the furrow open, raising and compressing the earth on either side, which conserves moisture and makes a wide furrow. Less seed is required in such a furrow, as it has plenty of room in which to stool.

Uniform Seeding Depth

As the seed is dropped in front of the disc bearing with the downward turn of the discs, the discs aid gravity in carrying the seed to the bottom of the furrow. The discs on either side of the falling seed make it impossible for trash, dry top soil or anything else to get into the furrow before the seed. As the discs roll on, the moist earth which has just been displaced from the furrow falls back onto the seed before the dry surface dirt or trash falls in. Thus a uniform seeding depth is insured.

Every good seed sown with the Moline-Monitor Double Disc Drill grows; all sprout at the same time. This insures even growing and even maturing, obviating harvesting a crop, part of which is over ripe and part still in the milk.

PRICES WITH FERTILIZER AND GRASS SEED ATTACHMENTS

Double Disc Drills

10 double discs, 7 inches apart.....\$172 50
12 double discs, 7 inches apart..... 192 50

Hoe Drills

10 x 7 Spring Hoe.....\$155 00
12 x 7 Spring Hoe..... 165 00

Prices on other styles and sizes quoted on request. Before you buy a grain drill ask for special catalogue giving full details, testimonials and guarantee.

Prices include Covering Chains and Seat or Footboard.

Success Junior Potato Digger

The Success Junior is the most popular plow-type Potato Digger on the market. Just the Digger for the small grower—in fact, no farmer can afford to be without this Digger, even if he raises only sufficient potatoes for his own consumption.

It is simple in design, rugged in construction, is adjustable as to depth, light draft, easily operated and does a clean job of digging.

The weight of the double and single trees, together with the pull of the horses, draws the point into the ground, but its depth is regulated by the adjustable wheel at the end of the beam.

The point or shovel enters the ground and the furrow-slice is divided by the breaker; the double moldboard turns each half back over the wings and steel tines. Here the tines permit the soil to pass between them while the potatoes roll back over the end of the fork and remain on top of the ground.

The Beam and Handles are made from carefully selected and well-seasoned oak. Handles have adjustable braces accommodating themselves to the height and convenience of the operator, assuring easy and complete control.

Price, with single wheel foretruck \$12.50; with double wheel foretruck as shown in illustration, \$13.50.



"Duplex" Potato Grader

Bags both No. 1 and No. 2 sizes in one operation

The advantage of grading potatoes by machine is now universally recognized. In the "Duplex" we offer a well-designed and substantially built Grader that will bag or barrel the No. 1 and No. 2 sizes in one operation. The main frame is made of wrought-iron pipe, and is detachable from the body of the Grader, so that it may be taken into remote places, transported or stored more easily. It is mounted on 10-inch wheels, making it portable, and is built low for convenience in loading and sorting.

The grading aprons, or belts, are of bar-link construction, and will last twice as long and grade just as accurately as any wire-woven belt, also making possible a positive drive to the grading belt without slipping.

The side-grading attachment for simultaneous grading and bagging of the "Seconds" underlaps the main frame. The advantage of this arrangement of the first and second belts is not only the elevating and bagging feature, but it permits inspection of both first and second grades without rehandling.

Model "A" Hand Grader. Capacity 200 to 250 bus. per hour, complete with Double Bagging Attachment, \$67.50. Special circular, also prices of larger sizes and power-driven Graders, quoted on request.



Sure Drop No. 5 Corn Drill

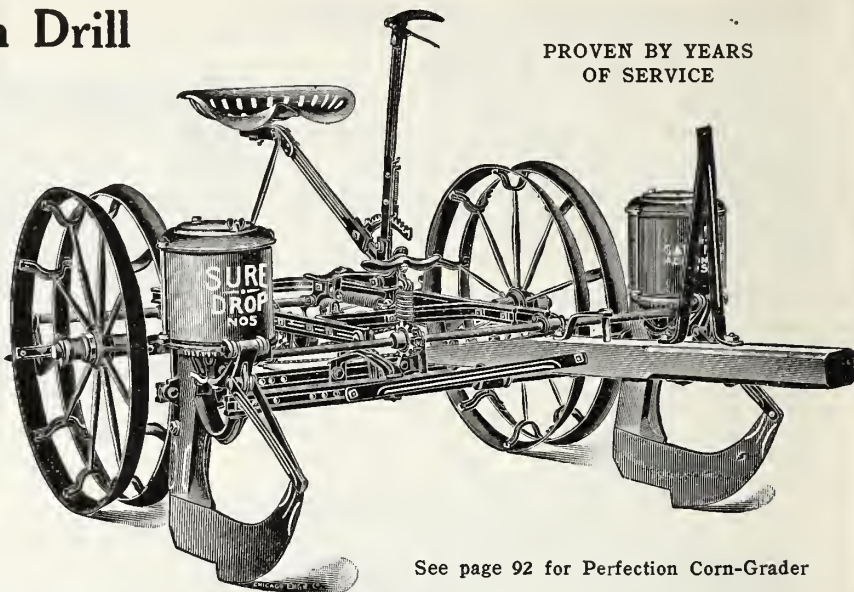
WITH EDGE DROP PLATES

The Sure Drop No. 5 is a two-horse machine for drilling corn, beans, and other similar crops that are grown in drilled rows. It is strictly a high-grade machine in every particular—as good as first-class material and skilled workmanship can make it. It is built almost entirely of steel and malleable iron, making it light, but especially strong and durable.

The Drill is adjustable from 28 inches to 44 inches between rows. By means of the three sets of plates which are regularly furnished and the 3-step sprocket wheel on the seed shaft, there are possible nine variations of the distance apart that seed can be dropped, varying from 6½ to 22 inches. Also special sprocket can be furnished for dropping closer than 6½ inches when wanted.

The Fertilizer Attachment is provided with a gate at the bottom of the hopper next to the spout. By raising or lowering this, various amounts of fertilizer are allowed to pass under and be delivered into the spout. The Fertilizer Attachment is thrown out of gear when the planter is raised, and thrown into gear again when the planter is lowered into the ground.

Furnished with 30-inch open-tire wheels. Planter is illustrated without the Fertilizer Attachment.



PROVEN BY YEARS
OF SERVICE

See page 92 for Perfection Corn-Grader

PRICES

Without Fertilizer Attachment.....	\$60 00	Double-trees and Neckyoke, extra.....	\$3 50
With Fertilizer Attachment.....	85 00	Special booklet furnished on request.	

Avery New Union Corn Drill

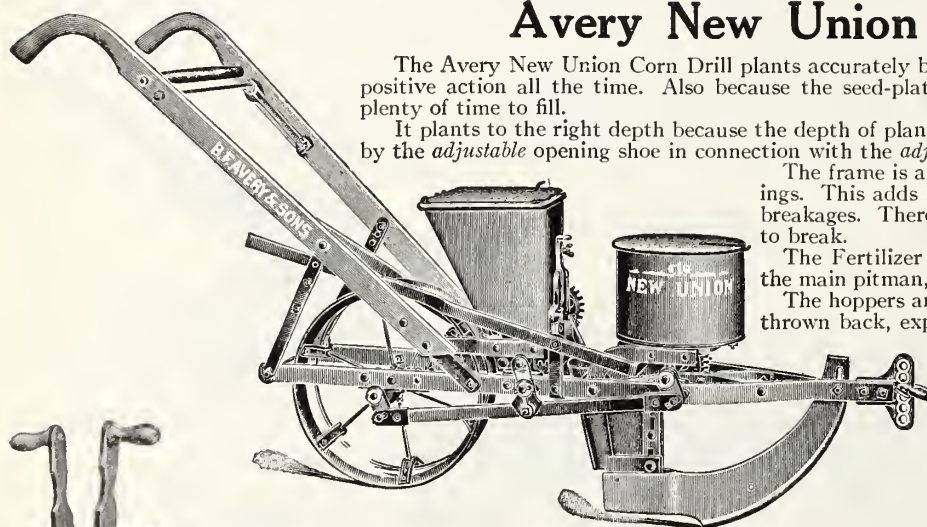
The Avery New Union Corn Drill plants accurately because the double pitman drive insures positive action all the time. Also because the seed-plates are extra large, giving all the holes plenty of time to fill.

It plants to the right depth because the depth of planting in any kind of soil can be regulated by the *adjustable* opening shoe in connection with the *adjustable* clevis.

The frame is all steel which eliminates the use of castings. This adds long life and freedom from troublesome breakages. There are no sprockets to clog up, no chains to break.

The Fertilizer Attachment is gear-driven direct from the main pitman, again eliminating sprockets and chains.

The hoppers are extra large and hinged so they can be thrown back, exposing all the gears, or can be lifted off the frame without using a tool. Planter is regularly furnished with a set of four plates. Pea and Bean Plates can be furnished at an extra charge of \$1. Price with Fertilizer Attachment \$23.75.



Acme Corn Planter with Fertilizer Attachment

SIMPLE—DURABLE—ECONOMICAL

This combination Corn Planter with Fertilizer Attachment is a two-hand slide type with an adjustable segmental slide of pressed steel; the hoppers, hopper bottoms, and conveyor tubes are of steel. The polished steel jaws are arranged to drop corn on each side and a little above the fertilizer or phosphate, which is dropped in the center. Fertilizer drop is regulated to suit the operator. A good tool for hand planting and hand fertilizing at the same time. Price \$3, postpaid \$3.25.

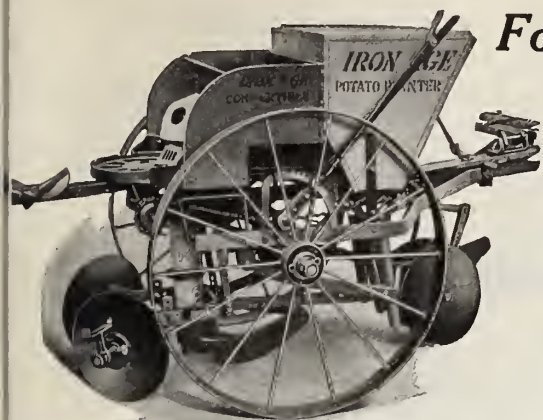
The Eclipse All-Steel Rotary Hand Corn Planter

Has a positive feed and four plates for planting one, two, or three grains at a time, and an extra plate for smaller seeds. Price \$2.25, postpaid \$2.50.

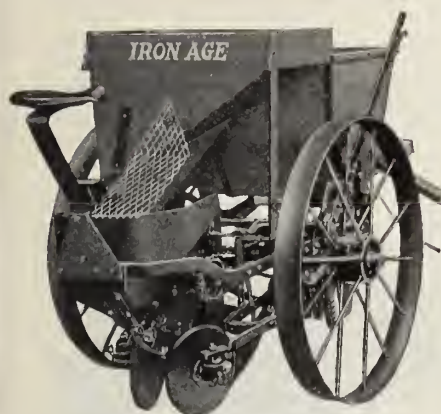


Acme Planter

Eclipse Planter



Iron Age Assisted-Feed Planter



Iron Age Automatic-Feed Planter

For Greater Potato Profits Plant With **IRON AGE** POTATO PLANTERS

Assisted Feed • Automatic Feed

The **Iron Age** Assisted-Feed (two-man) Planter is machine-fed, with hand corrections made by boy or man, and approaches most nearly 100 per cent planting. Recent improvements in adapting the elevator wheels to all sizes of seed have greatly reduced the work of the man on the rear seat.

The **Iron Age** Automatic-Feed Planter has adjustable picks for small, medium, or large seed. Has a very high degree of accuracy in planting—very few misses or doubles, and no bruising of seed. Seed hopper interchangeable with Assisted-Feed Planter. Picker wheel in plain view of driver at all times.

Both types of Planters are built with or without fertilizer attachment. This attachment sows high or low-analysis fertilizer in quantities desired. Fertilizer uniformly distributed on both sides of seed absolutely free from danger of fertilizer coming in contact with seed. The spacing of the seed in the row can be adjusted for 7, 8½, 10, 11½, 13½, and 15 inches apart. Special sprockets can be furnished for other spacings.

The opening plows lift and turn the soil, producing loose furrows. Plating-shoe splits the ridge in center of furrow, making a groove into which the seed is dropped—hence straight rows making spraying and digging easy. **Iron Age** Planters have convertible disc covering gangs for ridge covering or shallow covering.

No. 410. One row, Automatic Feed, without Fertilizer Distributor.....	\$102 50
No. 410R. One row, Automatic Feed, with Fertilizer Distributor.....	135 00
No. 424. One row, Assisted Feed, without Fertilizer Distributor.....	102 50
No. 424R. One row, Assisted Feed, with Fertilizer Distributor.....	135 00
Doubletrees and Neck-yoke, extra, if wanted.....	3 25

Price of two-row and three-row Planters quoted on request

Before you buy a Potato Planter
be sure to see the **Iron Age**. Complete catalogue on request.

Farquhar—Iron Age Elevator Potato Digger

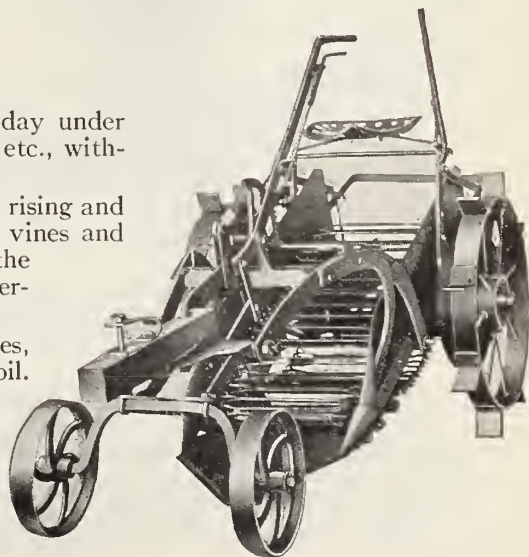
*A two-horse Digger for large or
small growers*

A light-draft, substantially built Digger that will dig 4 acres a day under average conditions. The 20-inch throat gives ample room for vines, etc., without choking.

Elongated or elliptical sprockets carry the elevator web, giving it a rising and falling movement, thus producing the agitation which separates the vines and causes most of the soil to fall through the web as soon as it passes the heel of the shovel. The endless elevator chain or web is built of interlocking crossrods.

Rigid, steel frame holds shovel at right depth to get all the potatoes, whether deep or shallow, and in stony, hard, clayey, or mellow soil. Rigid tongue gives full control in holding Digger over row on level ground or steep hillside. 27-inch wheels, with 3-inch rims, with cleats ¾ inches deep, furnish ample traction. Two-wheel front truck firmly carries the front end. Price, \$103.50. Doubletree and Neck-yoke, extra, if wanted, \$3.25.

Special catalogue on request.



Thompson's Royal

14 Feet Long

This Grass Seeder has won for itself first place among all kinds of Grass Seeders. Most accurate and economical machine for sowing clover, timothy, alfalfa, and other small seeds broadcast. Runs easily, and sows evenly in windy weather. The quantity of seed sown is accurately governed by the wheel, which moves correspondingly slow or fast as the machine is run over the ground. It is



Chain Feed Grass Seeder

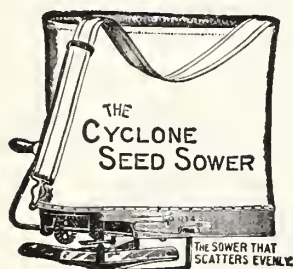
32-inch Wheel

instantly thrown out of gear, and the amount of seed sown is quickly governed by changing the pin in the index plate as thereon indicated. Does not injure or bunch the seed, but evenly distributes it the full length of the hopper.

Sows all small seeds like Clover, Timothy, and Alfalfa. Price \$13.50



THOMPSON NO. 106 WHEELBARROW SEEDER (similar to above Thompson's Royal Chain Feed Grass Seeder) is suitable for sowing lawn seed on a large scale. Gives uniform 10-foot spread; adjustable feed. Weight 60 pounds. Price \$19.50.



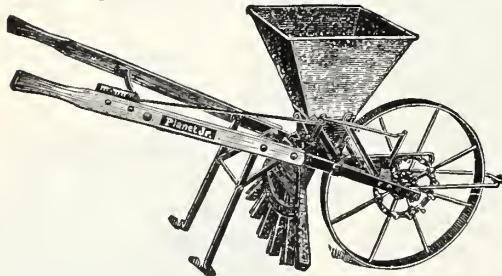
The Cahoon Seeder

The Cahoon Hand Broadcast Seed Sower, suitable for sowing all kinds of grain and grass seed, is one of the most efficient on the market today. The frame and handle gear are of malleable iron; the shafts of high-grade steel, with the gears securely fastened. The large gate is for grain and the small gate for grass seed; easily adjusted with automatic feeding gauge attached. The Cahoon is speeded so that the crank makes a complete revolution with each step. The bag is of 7-ounce duck and holds about 22 quarts. Price \$4.50, postpaid \$4.85.

The Cyclone Seed Sower

This Seed Sower can be used for sowing clover, timothy, and all other farm seeds that can be sown broadcast.

All the working parts are attached to a rigidly built frame of kiln-dried lumber. The Slope Feed-Board gives the seed a gravity flow and always keeps the hopper outlet filled without tilting the machine. The Automatic Feed Adjustment gives a positive force-feed and is quickly adjusted for different seeds. The touch of a lever will start or stop the flow of seed. Seed cannot clog or "rush." Price \$2, postpaid \$2.15.



Planet Jr. No. 220 Fertilizer Distributor

The No. 220 spreads fertilizer from 4 to 30 inches on the ground. The hopper capacity is one bushel and the weight of the load is placed over the wheel, making it easy to push. The No. 220 will distribute 100 to 2000 pounds of commercial fertilizer to the acre and will distribute fertilizer in the middles of three rows 12 to 14 inches apart; it will side-dress one side each of two rows up to 3 feet apart (one complete row; and corn in wider rows). You can use it in very narrow rows—as close as 9 inches. You can use it in 3½ to 4-foot rows by closing off the flow in three spouts and distributing through the other three—either on the right or left-hand side. Price \$27.

PLANET JR. No. 230A. Identical with the No. 220 distributor illustrated above except that it is equipped with a cultivating attachment. The No. 230A applies the fertilizer and thoroughly mixes it into the soil, all in one operation; has two front wheels, and is easily drawn by a horse. Price \$37.50.

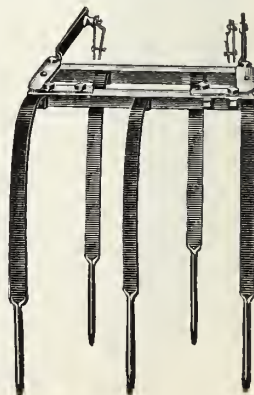
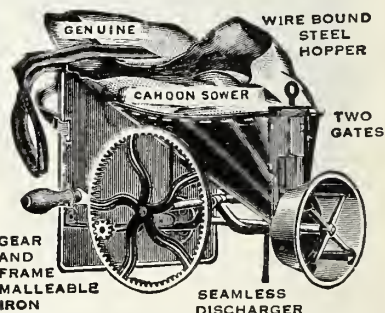
The Universal Fertilizer Attachment

Can be fitted onto most makes of riding cultivators in 20 minutes with an ordinary wrench, and can be detached by releasing one bolt. The flow of fertilizer is adjusted by a lever within reach of the operator without leaving the seat; can be adjusted to deposit fertilizer in the hill or drill it continuously. Throw-out device stops feed when backing or turning. Guaranteed to do the work for which it is intended. Price \$24.50.

Center Weeder Attachment

Can be fitted onto any iron-beam riding cultivator with our Universal Clamps. The small teeth loosen the ground directly around and among the small plants, going where the cultivator cannot reach.

Prices: 5-tooth attachment complete, \$3.75; 7-tooth complete \$4.25. By Parcel Post 25 cts. extra.



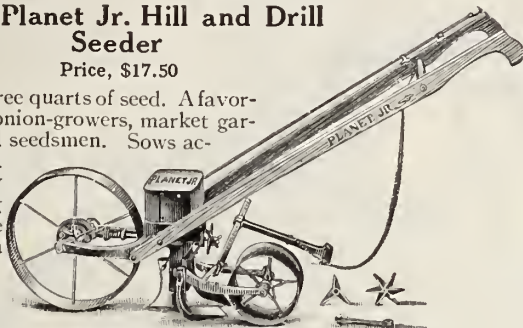
Planet Jr. Farm and Garden Tools

Planet Jr. Tools are the greatest savers of time, labor, and money ever invented for the farm and garden. They pay for themselves in a single season in bigger and better crops, and last a lifetime. Fully guaranteed.

No. 3 Planet Jr. Hill and Drill Seeder

Price, \$17.50

Holds three quarts of seed. A favorite among onion-growers, market gardeners, and seedsmen. Sows accurately in a narrow line making wheel-hoe cultivation easy.



Planet Jr. No. 5 Hill and Drill Seeder. Same as No. 3 but larger. Holds 5 quarts of seed. Price, \$20.

No. 4 Planet Jr. Combined Hill and Drill Seeder, Wheel Hoe, Cultivator, and Plow

Price, complete, \$18
Weight, 50 lbs.

As a Seeder only (No. 4D)
\$14.25
Holds 2½ quarts of seed



Plants in hills 4, 6, 8, 12 or 24 inches apart.

Soon pays for itself in the family garden as well as in the larger acreage. Sows all garden seeds (in drills or in hills), plows, opens furrows and covers them, hoes and cultivates quickly and easily. No. 4D, Hill and Drill Seeder, same as above less the cultivating attachments, \$14.25.

No. 11 Planet Jr. Double-Wheel Hoe Cultivator, Plow, and Rake

Price, with attachments
as in cut, \$13.75

Weight, packed, 39 lbs.

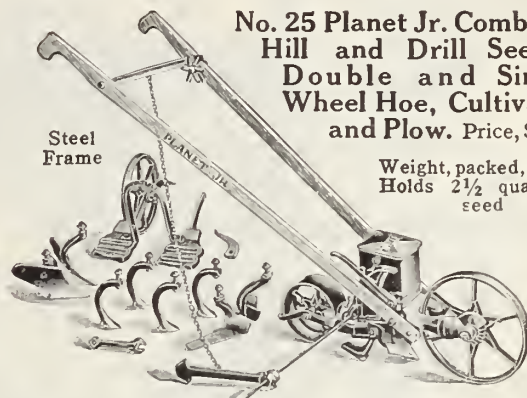


A Single and Double-Wheel Hoe in one. Straddles crops till 20 inches high, then works between. Has steel frames and 14-inch steel wheels. The greatest hand-cultivating tool in the world.

Planet Jr. No. 12 Double and Single-Wheel Hoe. Same as No. 11 but less the rakes and one pair of hoes. Price, \$10.75.

No. 25 Planet Jr. Combined Hill and Drill Seeder, Double and Single-Wheel Hoe, Cultivator, and Plow. Price, \$21.50

Weight, packed, 61 lbs.
Holds 2½ quarts of seed



As a Seeder it is practically the same as the Planet Jr. No. 4, and as a Wheel Hoe it has the same steel frames and cultivating attachments as the Planet Jr. No. 12 Double-Wheel Hoe.

Two acres a day can easily be worked, and when it is done it will be a better job than several men could have done in the same time with hand hoes.

No. 300 Planet Jr. Drill Seeder

Price, \$20

Weight, packed, 55 lbs.
Capacity, 4 quarts



The No. 300 Seeder is a very efficient plate seeder intended primarily for the market gardener and farmer. Quick, easy, and accurate adjustment for all sizes of seed can be made in an instant. Plates provide 39 different holes through which a patented feed-wheel drops seeds in a steady, even row without crushing or jamming. It has removable hopper for emptying excess seeds.

No. 16 Planet Jr. Single-Wheel Hoe, Cultivator, Rake, and Plow

Price, \$9
Weight, 30 lbs.
Steel Frame
15-in. Steel Wheel

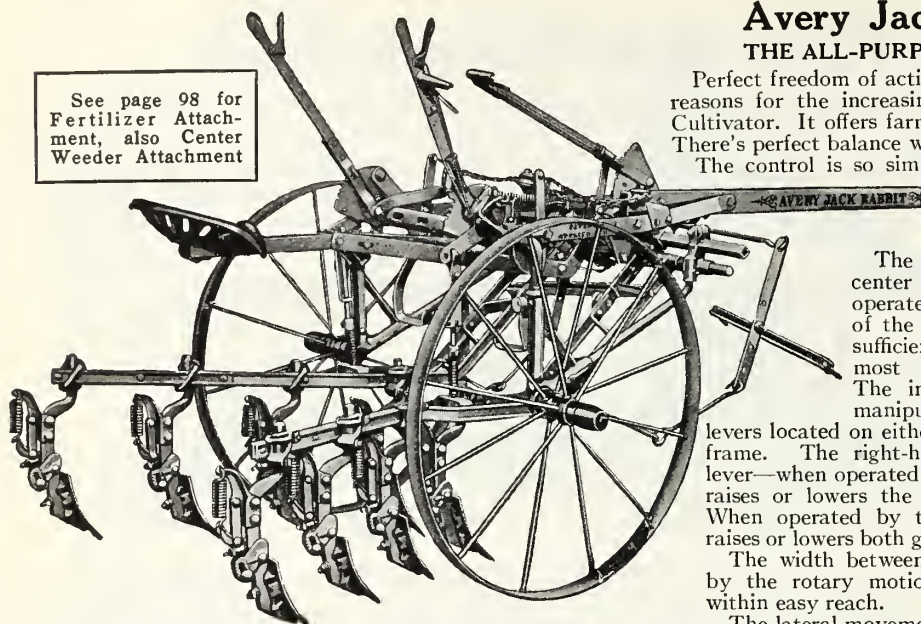


Equipment very complete, including one pair of 6-inch hoes for weeding and shallow cultivation, three cultivator teeth for general and deeper cultivation, one plow with landside for hilling, ridging, and plowing, one 3-tooth and one 5-tooth rake for fine, close cultivation, and one leaf-lifter, which is useful in protecting overhanging leaves and vines. An ideal machine for the family garden.

Planet Jr. No. 17 Single-Wheel Hoe. Same as No. 16 but without the rakes. Price, \$7.75.

COME IN AND GET THE PLANET JR.
YOU NEED

See page 98 for
Fertilizer Attach-
ment, also Center
Weeder Attachment



Avery Jack Rabbit Cultivator

THE ALL-PURPOSE, ALL-CROP CULTIVATOR

Perfect freedom of action; absolute ease of motion—these are the reasons for the increasing popularity of the Avery Jack Rabbit Cultivator. It offers farmers an easier way of cultivating all crops. There's perfect balance whether gangs are raised or lowered.

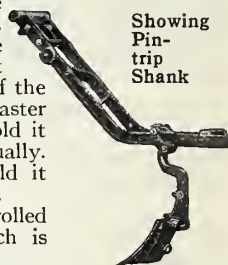
The control is so simplified and the moving parts so perfectly balanced that many of the manipulations are practically automatic upon the releasing of a pawl.

The tilting or leveling lever is placed in the center within convenient reach of the driver. It operates on the quadrant secured in the rear end of the pole, which allows a range of adjustment sufficient to overcome the most extreme conditions.

The individual gangs are manipulated by two short levers located on either side at the rear of the frame. The right-hand lever is the master lever—when operated by the side handhold it raises or lowers the right gang individually. When operated by the vertical handhold it raises or lowers both gangs simultaneously.

The width between the gangs is controlled by the rotary motion of a crank which is within easy reach.

Showing
Pin-
trip
Shank



The lateral movement of the machine is controlled, while working, by stirrups and chain connections. A slight pressure of the left foot, for example, angles both wheels to the left, and vice versa. There is no lost motion. The axle and lower frame member are a combined one-piece forging. This swivels in its front connection and also in its connection to the arch, the whole being carried on rollers which operate on the pipe beam frame member. Angling the wheels to right or left does not affect the relative lateral position of the gangs. The extra-wide front gang bearings keep the gangs tracking in perfect alignment, regardless of the direction in which the wheels are angled.

The tread adjusts, by 1½-inch stages, from 36 to 48 inches.

The Avery Jack Rabbit will effectively cultivate any crop that is planted in rows 24 inches apart and wider. The wheels are extra strong, 38 inches high, equipped with dustproof hubs.

No. 4. 6-Shovel, Spring-trip.....	\$58 00	No. 41. 8-Shovel, Spring-trip.....	\$62 00
No. 24. 6-Shovel, Pin-trip.....	52 00	No. 51. 8-Shovel, Pin-trip.....	54 00

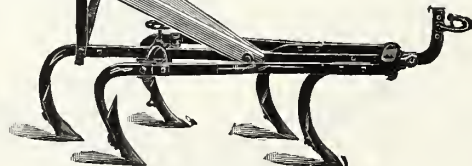
Six-Shovel Cultivators are furnished with six 3½-inch double-pointed Shovels; Eight-Shovel Cultivators with eight 2½-inch Shovels. Prices include shields. Hillers, if wanted, are \$1.75 extra. Descriptive circular on request.

Pittsburgh Cultivators

The Pittsburgh Cultivators are made of round-edge steel, and are highly finished. The outside stay braces hold the frame solid to any width it may be set.

Extra care is taken in the "setting" of the shovels to see that they "face" the work properly, have correct "pitch" and are evenly spaced so that they will cut all the ground.

Pittsburgh 5-Tooth
Cultivator
with Hand-Wheel
Adjustment



5-Tooth Cultivator with Hand-Wheel Adjustment.....\$5 75

5-Tooth Cultivator with Adjusting Lever.... 6 15

7-Tooth Cultivator with Hand-Wheel Adjust-
ment..... 6 75

7-Tooth Cultivator with Adjusting Lever.... 7 15

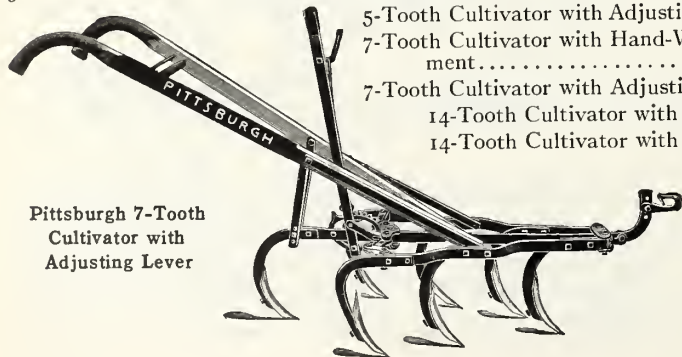
14-Tooth Cultivator with Hand-Wheel Adjustment.....\$5 85

14-Tooth Cultivator with Adjusting Lever..... 6 25

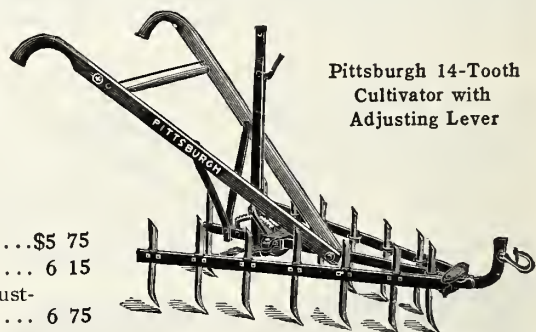
Gauge Wheel Extra..... 85

Horse Hoes Extra for 5- and 7-Tooth Cultivator... 1 50

Pittsburgh 7-Tooth
Cultivator with
Adjusting Lever



Pittsburgh 14-Tooth
Cultivator with
Adjusting Lever

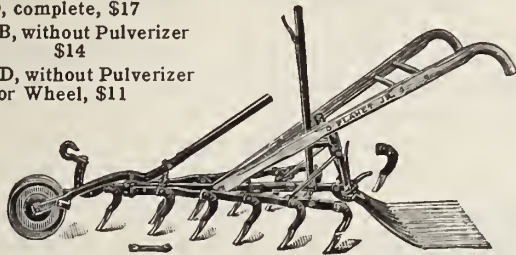


Horse Hoes for 5- and 7-Tooth Cultivators

PLANET JR. CULTIVATORS

Planet Jr. Twelve-Tooth Harrow, Cultivator and Pulverizer

No. 90, complete, \$17
No. 90B, without Pulverizer \$14
No. 90D, without Pulverizer or Wheel, \$11

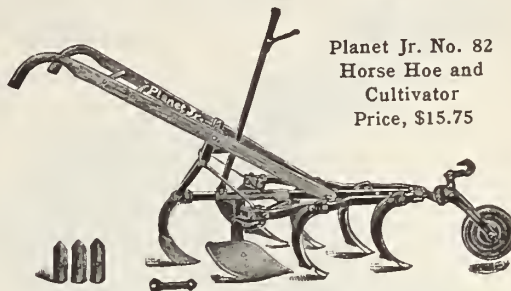


With the Twelve-tooth Harrow you go as deep or shallow as you like, come up close to row without injuring plants, cut out all weeds, stir the soil and fine it as with a garden rake. You widen and narrow as you please between 12 and 32 inches. A favorite with strawberry-growers, market-gardeners, etc.

We have other sizes and styles of Planet Jr. Cultivators than shown in this Catalogue. Write for a Planet Jr. Catalogue

No. 82 Planet Jr. Horse Hoe

Planet Jr. No. 82
Horse Hoe and
Cultivator
Price, \$15.75



A very popular tool because of the large amount and great variety of work that can be done with it. Finishes rows up to 42 inches apart and works the middle complete at one passage. Zigzag frame is particularly strong and the seven teeth insure fine and thorough cultivation.

No. 83 Plain Cultivator. Same as No. 82, but with 7 cultivator teeth only and without reversible standards. Price, \$14.25.

PITTSBURGH SHOVEL PLOWS

Pittsburgh Steel-Beam Double-Shovel Plow

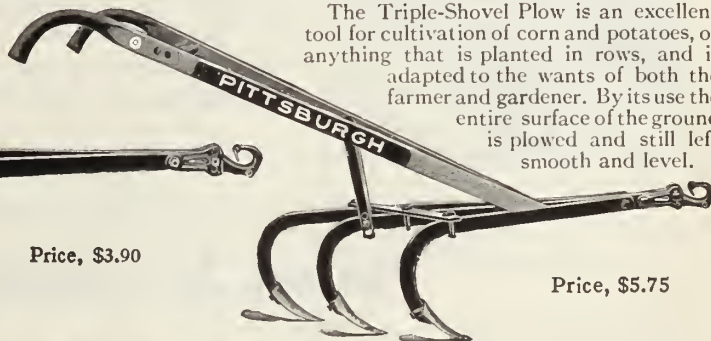
Shovels have proper pitch for entering ground right, and making steady running Plow. Beams made of solid steel, rolled, tapering at point.



Price, \$3.90

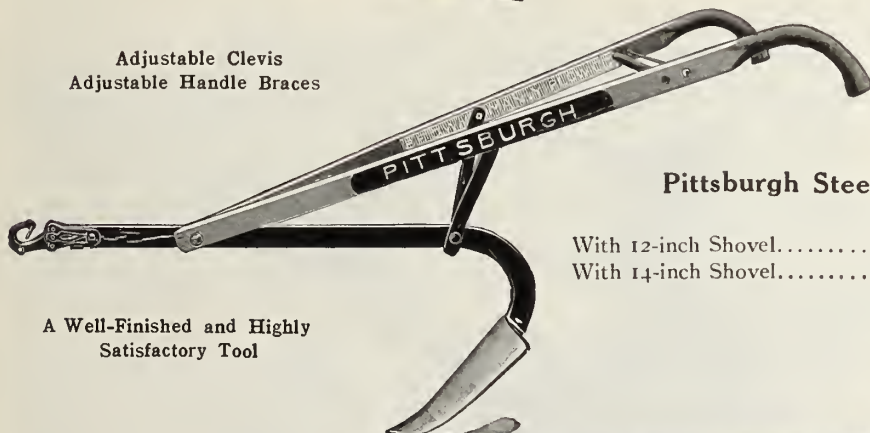
Pittsburgh Steel-Beam Triple-Shovel Plow

The Triple-Shovel Plow is an excellent tool for cultivation of corn and potatoes, or anything that is planted in rows, and is adapted to the wants of both the farmer and gardener. By its use the entire surface of the ground is plowed and still left smooth and level.



Price, \$5.75

Adjustable Clevis
Adjustable Handle Braces



A Well-Finished and Highly
Satisfactory Tool

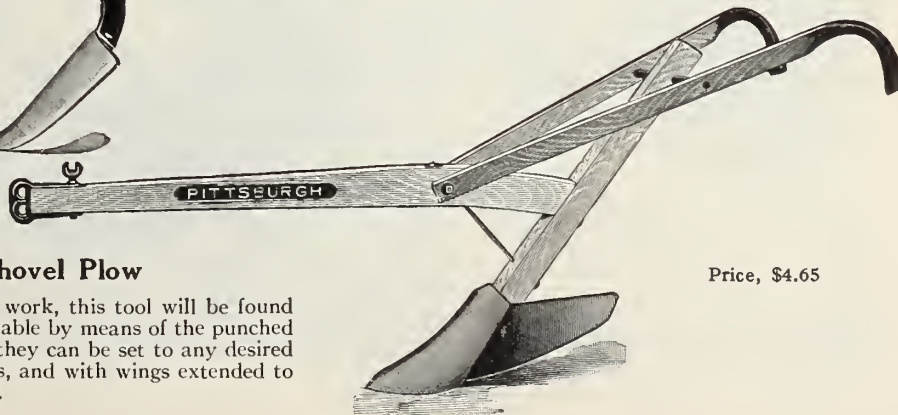
Pittsburgh Steel-Beam Single-Shovel Plow

PRICES

With 12-inch Shovel.....	\$3 50
With 14-inch Shovel.....	3 75

Pittsburgh Wing Shovel Plow

For hilling potatoes and other similar work, this tool will be found highly satisfactory. The wings are adjustable by means of the punched straps or braces that support them, and they can be set to any desired angle. Width of main shovel is 12 inches, and with wings extended to limit, it makes a total width of 26 inches.



Price, \$4.65

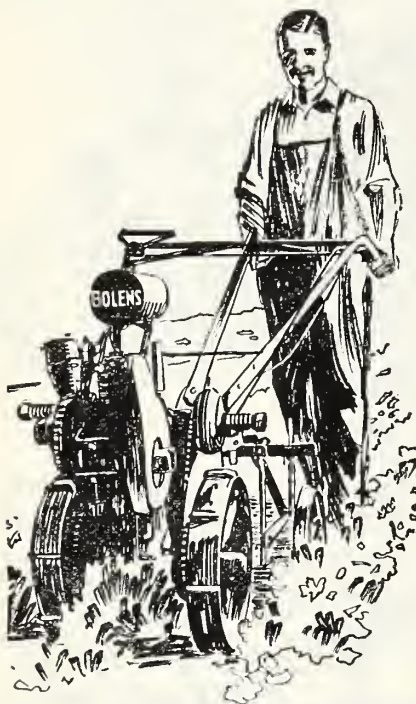
Bolens Garden Tractor

Garden Plowing

Harrowing

Cultivating

Lawn Mowing



The **Bolens** Tractor is a light, compact, easily operated Tractor that was developed in the field by experienced engineers assisted by practical growers. It has many patented and exclusive features, each vital and indispensable for the work required. The patented arched axle, 15 inches high, provides clearance for the plants and vision for the operator.

Bolens tool-control makes the guiding of the tools automatic with the steering of the Tractor, so it is easy to do the most accurate work and thereby largely eliminate hand-weeding. A double clutch drive provides power turn and leaves the drive-wheels free for turning or backing when power is off. Handles are offset and the operator walks between rows in a comfortable position. The width of drive-wheels over all is 18 inches.

Instant hitches make all attachments quickly interchangeable without the use of a wrench.

Bolens reduces the cost of production for the commercial grower and increases the earning power of the individual.

Bolens is made in several sizes.

Visit our store and see them on our sample floor.

We sell **Bolens** subject to demonstration.

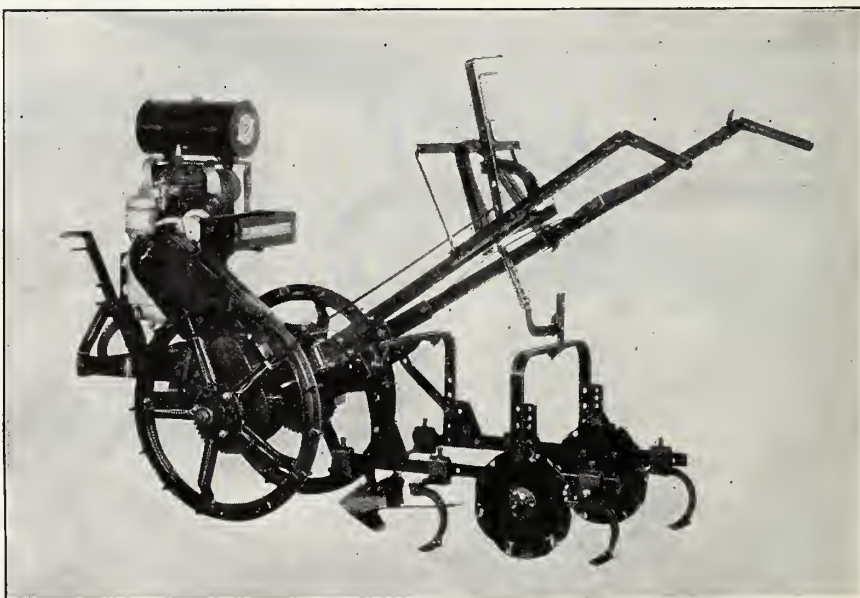
Write for the **Bolens** Catalogue and Complete Price-List

Planet Jr. Garden Tractor

The Planet Jr. is built to do a wide range of work. It is primarily a cultivator of narrow-row vegetable crops, and for that purpose is second to none. Most growers use Garden Tractors to do the work of wheel hoes. For this reason the attachment considered as standard on the Planet Jr. Tractor is designed to work straddle the rows, and to use hoes and cultivator teeth similar in design to the wheel-hoe tools. Other attachments have been designed to do other types of cultivating. One of these is an adaptation of a 5-tooth horse cultivator, for working between the rows. With this outfit fine work can be done in corn, berries, etc., which are too high to straddle.

The Planet Jr. will help you raise bigger and better crops. Built in two sizes. We welcome the opportunity to show them.

Write for prices and Planet Jr. catalogue.



Type AT Planet Jr. Tractor

A PROVEN PRODUCT

The Gravely Motor Cultivator

As each year goes by we are made to realize more fully the many advantages the Gravely Garden Tractor has to offer you. Its narrow tread, single-wheel traction, front-tool hitch, etc., are features worthy of consideration.

It's, above all, a quality-built job—your guarantee of continuous service. The manufacturers have been making garden tractors exclusively for the past ten years. They know their business. We've been here since 1876 ourselves. Isn't that a successful combination?

The Gravely is the only small Tractor on the market today on which the cultivating tools can be

used in front. This makes for easier and more accurate guiding. You are naturally looking ahead of you all the time, and without any extra effort can watch both the tools and plants at the same time.

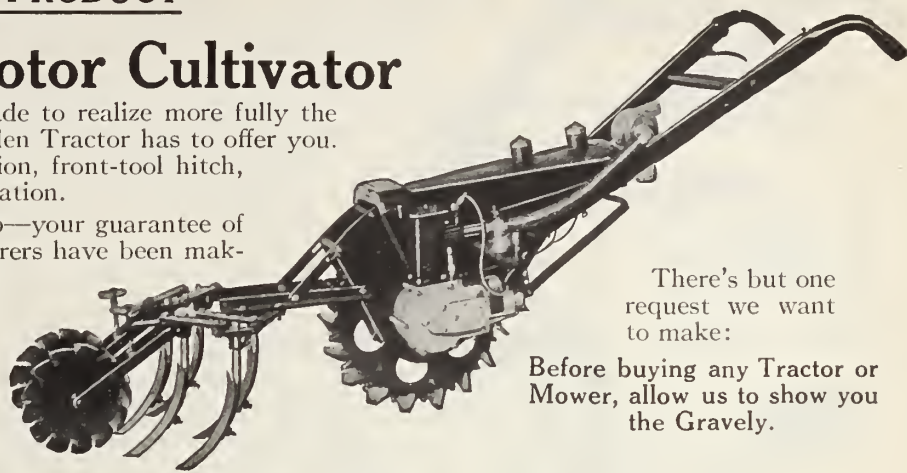
"I furrowed out a place for 1,500 dahlias in one hour—two days' work by hand."—*Pennsylvania Gravely owner.*

"For mowing it does the work of eight men with scythes. This was by actual test."—*Manager of a New Jersey golf course.*

"We are pleased to say that the Gravely has proved satisfactory and the machine will do all the manufacturers claim. We have found it very satisfactory."—*Another Pennsylvania Gravely owner.*

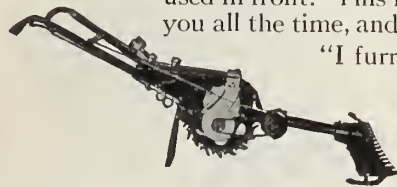
"Shortly after we purchased the Gravely Tractor, the writer stood at the end of one of our gladiolus rows and watched with interest its performance, and I told our operator that it was the finest and prettiest piece of cultivation I had ever seen with any tools or any outfit. The ease with which the Tractor is handled, the ability to make short turns, together with the placement of the tools in front where they are constantly in view, make closer cultivation possible, and thus more effective. We can heartily and cheerfully recommend the Gravely."—*An Ohio Gravely owner.*

CATALOGUE AND PRICE-LIST ON REQUEST



There's but one request we want to make:

Before buying any Tractor or Mower, allow us to show you the Gravely.



Beeman Multi-Service Tractor

World's Pioneer Small Tractor for the Multi Requirements of the Small Acreage Worker

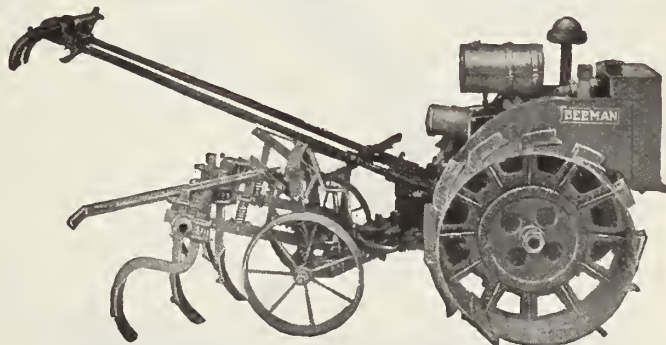
The Beeman serves throughout the twelve months. It plows, harrows, cultivates, cuts the lawn, mows the hay, does the belt-work, hauls the produce in from the field, etc. Beeman has the weight for one-horse work and the proper equipment for handling narrow-row work. It meets your every requirement.

Illustration shows it properly equipped for heavy-duty cultivating: working in berry bushes, orchard, vineyard, wide-row crops, etc. Equipment for various types of work is available and is attached by our quick method.

Motor is Beeman make, is water-cooled, 3½-inch bore, 4½-inch stroke, 4 h.p. at the belt, 2 h.p. at the draw-bar. High-tension magneto is regular equipment.

A sturdy, reliable Tractor that furnishes you the help needed at the time wanted.

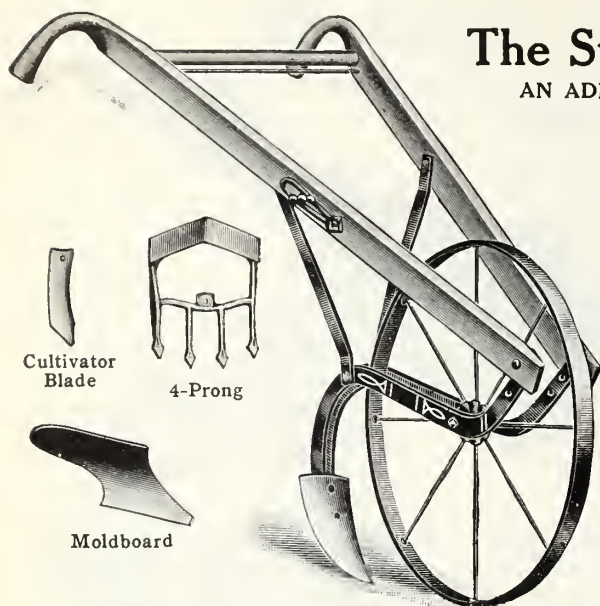
WRITE FOR CATALOGUE AND PRICE-LIST



Beeman equipped with 4-in. Extension Rims, Trailer and Cultivator Attachment

Johnson Motor Scythe.

A power-driven grass and weed cutter that will do the work of 8 men with hand scythes. See page 186.



The Star Garden Cultivator

AN ADMIRABLE TOOL FOR THE GARDEN

This tool is a universal favorite and it is safe to say that there is no similar tool made that in the matter of ease of operation, high grade material, and fine finish will equal the Star. The Beam is made of a very stiff steel, and is constructed so that when handles are attached the center of weight falls directly over the pivoting point which forms the axle for wheel, making it self-balancing, and which admits of its being propelled with a minimum of power. Handles can be raised and lowered to suit man or boy. It is noted for its light draft and the great amount of work it will do. Built of steel throughout, except the handles which are of selected hardwood.

The 5-Prong Attachment is also sold separately and can be used on other makes of garden plows of same general type. By means of this attachment you are able to cultivate the soil in proper manner and the weeds will have absolutely no chance to sprout. Also the proper stirring of the soil prevents evaporation of the valuable soil moisture which feeds and gives life to the growing plants. No garden cultivator is complete without this attachment.

No. 1. Complete, as shown.....\$3 25
No. 2. With 5-Prong Attachment, Moldboard and Cultivator Blade. 3 50
5-Prong Attachment alone 75 cts., postpaid. 85

This cut shows No. 1 Complete



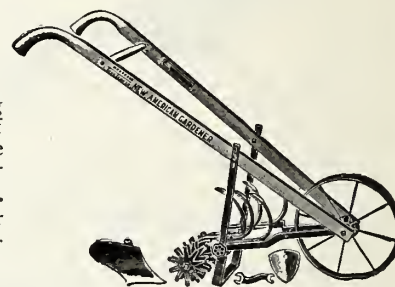
5-Prong Attachment

New American Gardener Cultivator

The New American Gardener is a time- and labor-saver; it is easily handled, requiring less effort than many other Cultivators. It combines three practical cultivating tools of greatly improved design attached to one head, and the New Mulcher-Pulverizer used with the scuffle hoe. A few turns of the hand-wheel releases the head, allowing it to revolve in order to place any of the three tools in position for use. There are no lost attachments to look after.

G2. Furnished with one 4½-inch wide Shovel, one thin-bladed Scuffle Hoe, five Cultivator Teeth attached to the revolving head, and one 8½-inch Mulcher-Pulverizer. \$6.25 (postpaid \$6.65).

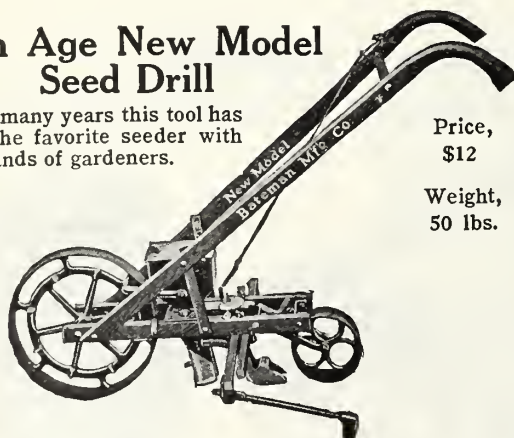
G2X. Same tool equipped with Moldboard Plow. \$7 (postpaid \$7.40).



G2X. New American Gardener Cultivator

Iron Age New Model Seed Drill

For many years this tool has been the favorite seeder with thousands of gardeners.



Price,
\$12

Weight,
50 lbs.

It has exact regulation of seed discharge by using an eccentric index or indicator, which adjusts the slide for the seed opening exactly where you want it.

The index is in plain sight when the tool is in operation—the names of the principal seeds are shown on it—no reference table is necessary.

The flow of seed can be instantly stopped by a swinging cut-off, operated by a cord and ring on the handles. Prevents loss at ends of rows and is preferable to a slide cut-off that is likely to be jammed by falling seed.

Gem Single Wheel Hoe and Cultivator

Price, complete with all tools
\$7.35

Weight, 28 lbs.



The working tools include set of five slender cultivator teeth, each stamped from one piece of steel and guaranteed for thorough work, especially in hard soil; two sizes of scuffle hoes for working between the rows; and pair of plows which can be used together as one plow or separate for hilling. The scuffle hoes are 4 and 8½ inches wide.

The wheels are adjusted in height by moving frame braces up or down on ratchet just in front of handles.

The handles can be adjusted to suit short or tall people.

FARM AND GARDEN BOOKS

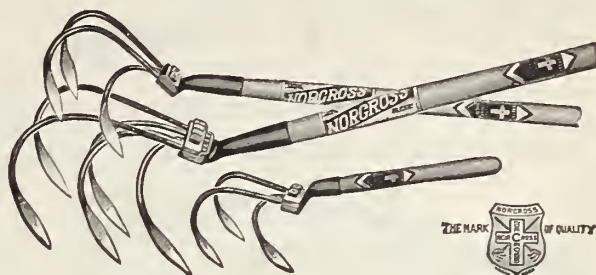
See pages 206 and 207 for our list of the latest and best Farm, Garden, and Poultry Books.

Norcross

THE POPULAR ADJUSTABLE HAND GARDEN CULTIVATOR

The Norcross Line provides, for both men and women, the most modern tools at a moderate cost. Made in three sizes, of highest quality material, attractively finished and especially well constructed. The sharp tapering prongs pulverize the ground thoroughly from 1 to 5 inches deep and leave it level, loose, and untrampled. Works between rows or center shovel may be removed and rows straddled. It permits working the soil close up to plants without injury to roots or foliage.

5-prong, 4-ft. handle (weight 3 lbs.).....\$1 00
 3-prong, 4-ft. handle (weight 2 lbs.)..... 75
 Midget, 9-in. handle (weight 12 ozs.)..... 50
 Midget by parcel post, prepaid, 55 cts.



The Barker Weeder, Mulcher and Cultivator

One man with a "Barker" can do more work, do better work than ten men with hoes. It cultivates and pulverizes the soil, forming a soil-mulch, which prevents evaporation, thus conserving moisture. The lower knife passes below the surface of the ground, where it cuts off all the weed roots, while the revolving reel working in combination with it, cuts up the soil, separates the dirt from the weed roots and forms a perfect soil-mulch. Made in two models, the Barker and the Barker Jr.

The Barker has solid wheels which are more substantial than open wheels and do not tend to fill up with moist dirt. It is heavier and stronger throughout and is especially recommended if your ground is strewn with sticks, roots, or stones. The favorite garden machine for more than a quarter century.

No. 9D. An excellent size for general all-round garden work. Women and children use this size. Weeds and mulches a strip 9 inches wide.....\$9 50

No. 10D. Lower knife cuts 10-inch strip. Favorite for large gardens and with truck growers.....10 60



The Barker Jr.s are built of the same high-quality materials as the Barker except they have spoke wheels and are made of slightly lighter material.

No. 6. Especially adapted where rows are close together or for small gardens. Lower knife cuts strip 6 inches wide....\$7 25

No. 8½. Women and boys and girls like this size. It weeds and mulches a strip 8½ inches wide..... 7 95

No. 10. A very popular size. Works a strip 10 inches wide..... 8 45

Ask for Special Descriptive Circular. Prices on other sizes quoted on request

Japanese Broom Rake

Made of split bamboo, cleans the lawn or grass-plot as completely as though swept with a broom. Price, with hardwood handle, 75 cts.; with bamboo handle, 45 cts.

Steel Garden Rake
 Forged from one solid piece of steel; straight teeth; hammer-drawn, single shanks.
 10 teeth.....\$1 00 16 teeth...\$1 30
 12 teeth..... 1 10 18 teeth... 1 40
 14 teeth..... 1 20

Eureka Weeder

Very convenient tool for weeding and cultivating in the garden. 50 cts., postpaid 60 cts.

Magic Weeder Hoe

A handy tool for work in the flower- or vegetable-garden. 20 cts., ppd. 25 cts.

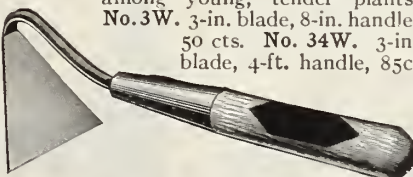
"Francis" English Wall Nails

Made with unbreakable shanks and soft lead heads or clips, for securing fruit trees, roses, and climbing plants to walls. 1½-in., 50 cts. per doz., \$3.50 per 100.

Brume Rake
 Made with flexible flat spring teeth. Light in weight but strong and durable. No. FBR22. 85c.

Triangular Steel Weeders

Used extensively for close garden-work among young, tender plants.
 No. 3W. 3-in. blade, 8-in. handle, 50 cts. No. 34W. 3-in. blade, 4-ft. handle, 85c.



Gem Garden Spade

A handy tool where careful cultivation is required. 50 cts., postpaid 60 cts.



No. 2 Planet Jr. Grass Edger

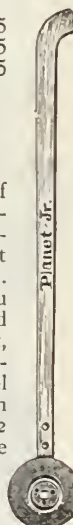
Neatness is the greatest secret of attractiveness in grounds surrounding a house, and to have this neatness the grass bordering walks must be frequently edged or trimmed. With the No. 2 Planet Jr. Edger you can edge either straight or curved walks of cement, stone, or brick, rapidly and easily. The sharp edging disc is made of high-grade steel and will last for years. Your lawn mower needs an assistant—the No. 2 Planet Jr. Grass Edger—to finish the job. \$1.75, postpaid \$1.90.

Speedy Cultivator

A very useful tool for work around flower-beds, shrubs, and roses. No. SC4. With 4 tines, \$1. No. FW3. With 3 tines, 90 cts.

Drop-Shank Steel Garden Trowel

Large and strong; made for hard service. Blades and shanks are forged from one solid piece of high-grade steel, tempered and polished. No. DST. 90c., postpaid \$1.



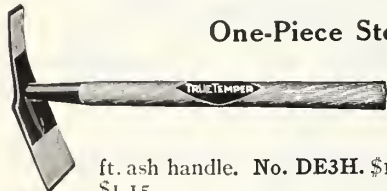


Garden and Field Hoes

No. G. 6, 6½, 7, and 7½-in. blades, 4½-ft. handle, steel socket, best quality \$1.25.

No. R. 6 or 7-in. blade, 4-ft. handle, steel socket, light weight. 65 cts.

No. LY5 Ladies' Hoe. 5-in. blade, 90 cts.



One-Piece Steel Mattock

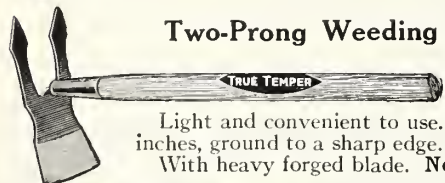
Just the tool for heavy soil. Has two oil-tempered blades. Strong and light. 4½-

ft. ash handle. No. DE3H. \$1.35. No. DE3. Two-piece. \$1.15.



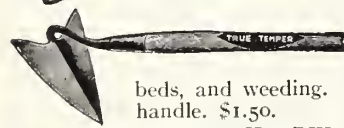
One-Prong Weeding Hoe

A handy tool for the garden. No. 1PF. 75 cts.



Two-Prong Weeding Hoe

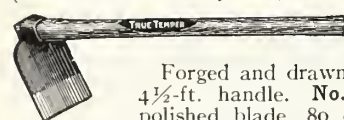
Light and convenient to use. Width of blade 3½ inches, ground to a sharp edge. No. 2PF. 75 cts. With heavy forged blade. No. 2PH. \$1.25.



Warren Hoe

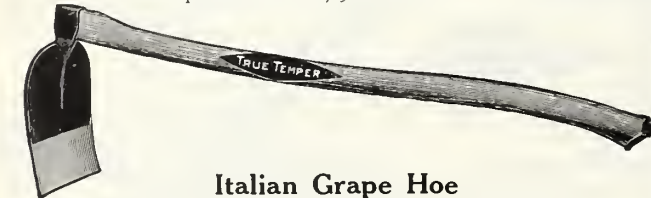
For transplanting, making and covering drills in flower-beds, and weeding. No. W. 7½-in. blade, 4½-ft. handle. \$1.50.

Baby Warren Hoes. No. BW. 4½-in. tempered steel blade (measured corner to point), 6½-in. handle. 75 cts.



Square Eye Handled Hoe

Forged and drawn from one solid piece of steel. 4½-ft. handle. No. GE6-O. With 4½-in. half-polished blade, 80 cts. No. GE3-O. With 6-in. half-polished blade, 90 cts.



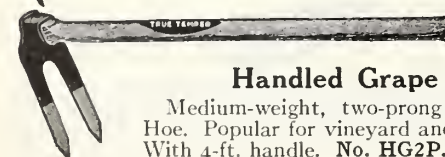
Italian Grape Hoe

Polished, hot-forged blades riveted to heavy malleable iron eye. 7 x 9-in. blades, 3½-ft. white ash handle. A heavy tool for heavy work. No. IGH7. \$2.



Potato Hook

Four diamond-back tines; goose neck. 4½-ft. handle. No. 4GND. \$1.35.



Handled Grape Eye Hoe

Medium-weight, two-prong Grape or Weeding Hoe. Popular for vineyard and small fruit-patches. With 4-ft. handle. No. HG2P. \$1.50.



Hazeltine Weeder

One of the best little implements ever used in a garden. Made from special high-grade steel.

Price 35 cts., postpaid 40 cts.

True Temper Weeder

Same style as Hazeltine Weeder except heavier material. No. BW1. 60 cts., postpaid 65 cts.

Asparagus Cutter



40 cts., postpaid 50 cts.

No. 2500. Used also as a weeder and dandelion digger.

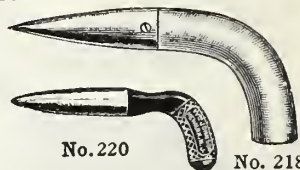
Dibbles

218. Wood handle, usual size. \$0 70

219. Wood handle, small size. 65

2180. Wood handle, brass point. 1 00

220. All iron. Weight, 2 lbs. 65



No. 220

No. 218

Garden Trowels



No. 215



No. 211

211. Forged steel. 5-in. 65 cts., 6-in. 70 cts., 7-in. 75 cts.

217. Transplanting. 6-in. 20c., 7-in. 25 cts., 8-in. 30 cts.



No. 217



No. 217-A

215. English Pattern. 6-in. 25 cts.

217-A. Transplanting Hoe. 7-in. 75c.

Postage, 10 cts. each, extra

Moe's Garden Tools



No. 80 Trowel

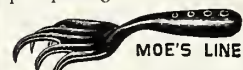
One-piece pressed steel. Finished in black baked enamel. Length

of blade, 6 inches. Price 20 cts. each, postpaid 30 cts.

One-piece pressed steel. Finished in black baked enamel. Length of blade 6 inches; width 1¾ inches. Price 20 cts. each, postpaid 30 cts.



No. 81 Transplanting Trowel

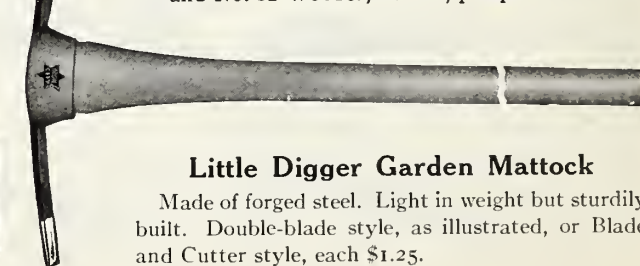


No. 82 Weeder

One-piece pressed steel. Finished in black baked enamel. Is one of the most useful and handy garden tools made. Price 20 cts., postpaid 30 cts.

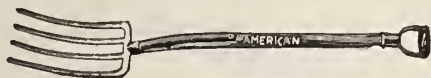
COMBINATION OFFER:

Set of three tools, No. 80 Trowel, No. 81 Trowel, and No. 82 Weeder, 50 cts., postpaid 65 cts.



Little Digger Garden Mattock

Made of forged steel. Light in weight but sturdily built. Double-blade style, as illustrated, or Blade and Cutter style, each \$1.25.

**SPADING FORKS.**

- 4 tines, about 11 inches long, wood D-handle.....\$2 25
 4 tines, about 11 inches long, malleable D-handle..... 1 75
 4 tines, about 7 inches long, Boy's, malleable D-handle.. 1 15

SPADES, GARDEN.

- D-handle, solid plain back, $7\frac{1}{2}$ x 12 inches..... 1 50
 Long handle, solid plain back, $7\frac{1}{2}$ x 12 inches..... 1 50
 Drain, D-handle, solid plain back, $5\frac{1}{2}$ x 16 inches..... 1 65



English Digging Fork. Fork, shank and straps are one solid piece of steel, making it the strongest Fork we know. Four square, sharp-pointed, polished tines. $11\frac{1}{2}$ in. long, 8-in. spread, wood D-handle. No. ED4. \$2.75.



No. AFSD. **Automobile Spade.** Forged steel blade 5 x 8 in. Length over all, 24 in. 90 cts.

No. FSD. **Floral Shovel.** Similar to above. Length over all, 38 in. \$1.

Ensilage or Barn Forks.

Half polished oval tines, end tines turned up.



- No. 506. 6 $15\frac{1}{2}$ -in. tines, iron D-handle.....\$2 65
 No. 508. 8 16-in. tines, iron D-handle..... 2 90
 No. 510. 10 16-in. tines, iron D-handle..... 3 30



Hay Forks. Oval tines, strap ferrules.

- No. 034B. 3-tine, 4 -foot bent handle.....\$1 50
 No. 034 $\frac{1}{2}$ B. 3-tine, 4 $\frac{1}{2}$ -foot bent handle..... 1 60
 No. 035B. 3-tine, 5 -foot bent handle..... 1 70
 No. 035 $\frac{1}{2}$ B. 3-tine, 5 $\frac{1}{2}$ -foot bent handle..... 1 80
 No. 036B. 3-tine, 6 -foot bent handle..... 1 95



Manure Forks. Oval tines, strap ferrules, bent handle.

- No. 044. 4-tine, 4-foot bent handle.....\$1 75
 No. 04D. 4-tine, iron D-handle..... 1 85



Manure Forks. Oval tines, strap ferrules, bent handle.

- No. 064. 6-tine, 4-foot handle.....\$2 40
 No. 06D. 6-tine, iron D-handle..... 2 40

Cutter Mattock

Blade $2\frac{1}{2}$, 3, or $3\frac{1}{2}$ in. wide; Cutter $4\frac{3}{4}$ in. long. 85 cts.

Blade 3, $3\frac{1}{2}$, or 4 in. wide; Cutter $5\frac{1}{4}$ in. long. 95 cts.

**Scythes and Snaths**

Little Giant Grass Scythe, with Dutch Heel. 30 to 34-in. \$1.75, postpaid \$1.90.

True Temper "World's Finest" Grass Scythe. With wide Dutch heel. Briar edge. 28 and 30-in. \$2, postpaid \$2.15.



Weed Scythe, Heavy Pattern. 26 to 28-in. \$1.85, postpaid \$2.

Bush Scythe, Heavy Pattern. 18 to 22-in. \$1.85, postpaid \$2.

Little Giant Weed Cutter. Cutlery steel blade 11 inches long, 2 inches wide; handle 28 inches long (not illustrated). \$1.25, postpaid \$1.40.

English Riveted Back Scythe. 30 to 34-in. \$3, postpaid \$3.15.

German Blue Blade Scythe. Width of blade at heel, 4 in., length 30 in. Thin blade type; fully warranted. \$1.85, postpaid \$2.

German Blue Blade Scythe. With American heel. Can be used with patent snath. \$1.85, postpaid \$2.

Austrian Scythe. Same type as German Blue Blade. Straw-tempered finish. \$2, postpaid \$2.15.

Genuine Austrian Schwanen Sense Scythe. Straw tempered, finished with picture of two swans on blade. \$2.50, postpaid \$2.65.

Sharpening Outfit for German and Austrian Scythe. Consists of Hammer (without handle) and Anvil. Weight, 1 lb. \$1.25, postpaid \$1.35.

Patent Grass Snath No. 55. With loop bolt and nut. \$1.50, postpaid \$1.75.

Bush Snath No. 105. With loop bolt and nut. \$1.75, postpaid \$2.

Straight Snath, S3. For German and Austrian Scythes with ring and wooden wedges. \$1.50, postpaid \$1.65.

Nowatoco Scythook.

For cutting light bushes, weeds, and grass. Blade 18 in. long; handle $4\frac{1}{2}$ ft. long. \$1.50, postpaid \$1.70.

Little Giant Long-Handle Grass Hook. A useful tool for parks, cemeteries, golf grounds, etc. Blade $12\frac{1}{2}$ in. long; handle $3\frac{1}{2}$ ft. long. (Not illustrated.) \$1, postpaid \$1.15.



Little Giant Bush Hook. Crucible steel blade; 30-in. hickory handle. \$2.50, postpaid \$2.75.



Railroad Picks. 2 in. wide chisel end, weight 5 lbs., 85 cts. 2 in. wide chisel end, weight 6 lbs., 95 cts.

**Kelly Axes**

Forged, with crucible steel bit welded upon a mild steel body. Scientifically patterned; bursts the chips easily. Does not bind in the wood. 36-in. extra-quality hickory handle.

Single Bit, $3\frac{1}{2}$ or 4-lb. \$2.25; $4\frac{1}{2}$ or 5-lb. \$2.50; $5\frac{1}{2}$ -lb. \$2.75.
Double Bit, $3\frac{1}{2}$ or 4-lb. \$3; $4\frac{1}{2}$ or 5-lb. \$3.25; $5\frac{1}{2}$ -lb. \$3.50.

Hy-Lo Grass Shear

For trimming around walks and flower-beds. 63/4-in. blades, 30-in. hardwood handle. \$2, postpaid \$2.20.

Baker's
NEW AND IMPROVED
HY-LO
GRASS SHEARS

The Doo Klip Long-handle Grass Shear

Particularly desirable for use under bushes or shrubs, it also works perfectly along walks, foundations, and all difficult places. Operated from a standing or erect position.

\$2.50, postpaid \$2.70.

Little Giant Adjustable Grass Hook

Cutlery steel blade, 12 1/2 in. long. Blade adjustable to three positions. Steel shank shaped to raise handle. 65 cts., postpaid 75 cts.

English Grass Hook

Blade finest Sheffield steel riveted to heavy back. \$1, postpaid \$1.15.

Austrian Grass Hook

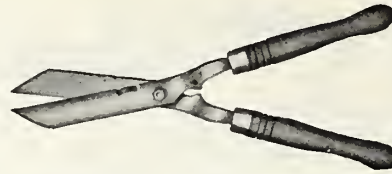
A Grass Hook that will hold an edge. Used extensively by cemeteries, golf clubs, etc. 75 cts., postpaid 85 cts.

German Blue Blade Grass Hook

Thin blade of high-tempered steel. 50 cts., postpaid 60 cts.

Turf Edger

For trimming edges of walks and driveways. Flat top blade. 4-ft. handle, \$1.35.



Quaker City No. 36 Hedge Shears. The blades are 1 3/8 inches wide, hollow-ground, polished, and notched for cutting heavy twigs. Blade and shank made from one piece of forged steel. Round handles; brass-plated ferrules.

6-in. blade.....\$1 25
8-in. blade.....1 60

9-in. blade.....\$1 80
10-in. blade.....2 00

Postage 15 cts. extra.



Disston No. 30 Hedge Shears. Steel blades; one blade serrated to prevent slipping. Half-oval, hollow-ground, full polished, hardened and tempered cutting edge;

tangs extend entire length of handle.

6 1/2-in. blade.....\$1 85
8-in. blade.....2 75

9-in. blade.....\$3 00
10-in. blade.....3 25

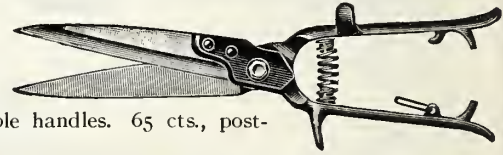
Postage 15 cts. extra.

Heinisch Hedge Shears.

One serrated edge and one knife edge; forged steel handles; tempered steel blades; substantial 1/8 inch bolt with nut and lock washer. Gun metal finish; polished blades. 6 1/2 in., \$2.25; 8 in., \$2.75; 9 in., \$3.25; 10 in., \$3.50. Postage 25 cts. extra.



"Keen Clip" Grass Shear No. 597. 6-in., full polished, hardened steel blades. Malleable handles. 65 cts., postpaid 75 cts.



No. 592. Same as No. 597, except has serrated edge. 85 cts., postpaid 95 cts.



Wiss Grass Shear. Operates with an easy up-and-down movement. No. 700. \$1.25, postpaid \$1.40.

Grass and Sheep Shears

No. A358. 5 1/2 in. Full polished. 50 cts., postpaid 60 cts.

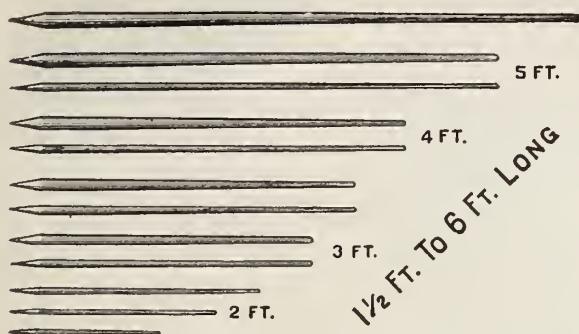
No. A3074E. 6 1/2 in. Finest quality cutlery steel American Shear. \$1.25, postpaid \$1.35.



No. 71. 6 1/2 in. Best quality Sheffield steel English Shear. \$3.50, postpaid \$3.60.

Stakes

Wooden, Round Tapering, painted green. Light Stakes are made from western white pine and the heavy from cypress.



	Doz.	100
1 1/2 ft. long, light weight.....	\$0 35	\$1 75
2 ft. long, light weight.....	50	3 25
3 ft. long, light weight.....	1 00	6 00
4 ft. long, light weight.....	1 40	8 75
3 ft. long, heavy weight.....	1 50	9 75
4 ft. long, heavy weight.....	1 85	12 75
5 ft. long, heavy weight.....	2 50	16 25
6 ft. long, heavy weight.....	3 00	20 00
Natural Bamboo. 8 ft. long.....	75	4 00

	100	1,000
Hyacinth. Painted green. 1 ft.....	\$0 35	\$2 00
1 1/2 ft.....	45	2 50

Japanese Bamboo Canes. Dyed green. These Canes are cheap, light, and of uniform pencil thickness throughout. Just the thing for pot plants and plants that need just a light support.

	Doz.	50	100	1,000
2 feet.....	\$0 12	\$0 35	\$0 50	\$3 75
3 feet.....	15	45	65	5 00
4 feet.....	20	60	1 00	7 50

Heavy Bamboo Tonkin Stakes. These are of even diameter throughout, strong, and withstand weather conditions and the dampness of the earth on account of their natural outside polish. Make excellent supports for dahlias and plants of this type.

	Doz.	50	100
4 feet, 1/2 to 5/8-in. diam.....	\$0 60	\$2 00	\$3 00
5 feet, 5/8 to 3/4-in. diam.....	1 00	3 00	5 00
6 feet, 5/8 to 3/4-in. diam.....	1 10	3 25	5 50
8 feet, 5/8 to 3/4-in. diam.....	1 25	3 75	6 50

Garden or Pot Labels (Painted)

	100	500	1,000
4 in. x 5/8 in. wide.....	\$0 50	\$1 75	\$2 85
5 in. x 5/8 in. wide.....	55	1 90	3 10
6 in. x 5/8 in. wide.....	60	2 15	3 50
8 in. x 7/8 in. wide.....	1 15	4 50	8 25
10 in. x 7/8 in. wide.....	1 25	5 25	10 00
12 in. x 1 1/8 in. wide.....	1 65	7 25	14 00
3 1/2 in., copper-wired.....	60	2 00	3 25



Wire Hanging Basket

Wire Hanging Baskets

	Each	Doz.
Hand-made; enameled foliage-green.....	\$0 35	\$3 75
8-in. diam.....	45	4 75
10-in. diam.....	55	6 00
12-in. diam.....	65	7 00
14-in. diam.....	75	8 00

Garden Bird-Baths with Pedestal

Bowl is 19 1/2 inches in diameter. Furnished in two heights of pedestal.

No. 1. 20 1/2 inches high. Price, complete.....	\$7 00
No. 2. 23 1/2 inches high. Price, complete.....	9 00

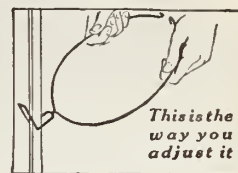
Adjusto Plant Supports

A sturdy, hard-wood stake seven-eighths inch square, 3, 4 or 5 feet long, with a strong wire support instantly adjustable to any height.



Saves space because it keeps your plants in the air and sun, and from the ground. Enables you to cultivate close to the plant. "Adjusto" supported tomatoes ripen to perfection. "Adjusto" supports bring out the full beauty of Dahlias, Chrysanthemums and all the slender, tall-growing varieties.

\$6.50 per 100; 2 ft. 13c. each, \$1.10 per doz., \$8 per 100.



	Each	Doz.
3-ft.....	\$0 25	\$2 10
4-ft.....	28	2 40
5-ft.....	30	2 70
6-ft.....	35	3 00

For Potted Plants, etc.,
Stakes 1/4 in. square, wires
4 1/4 in. diameter. 1 1/2 ft.,
10 cts. each, 90c. per doz.,
\$6.50 per 100; 2 ft. 13c. each, \$1.10 per doz., \$8 per 100.

Earthen Flower Pots
Standard Pots

Inside diam.	Each	Doz.	100
2 1/2 in.....	\$0 03	\$0 30	\$1 75
4 in.....	05	50	3 00
5 in.....	09	90	5 50
6 in.....	14	1 25	8 25
7 in.....	20	2 25	13 50
8 in.....	30	3 00	20 00
9 in.....	45	4 50	30 00
10 in.....	60	6 00	40 00
12 in.....	1 25	12 00	
Cemetery Vase.....	35	3 75	

Flower Pot Saucers

Inside diam.	Each	Doz.	100
4 in.....	\$0 04	\$0 40	\$2 35
5 in.....	05	50	3 10
6 in.....	08	75	4 60
7 in.....	10	1 00	6 25
Inside diam.	Each	Doz.	100
8 in.....	\$0 14	\$1 25	\$8 50
9 in.....	18	1 75	11 50
10 in.....	20	2 00	13 75
12 in.....	30	3 00	21 00

Azalea Pots

Inside diam.	Each	Doz.	100
6 in. x 4 3/4 in. deep.....	\$0 15	\$1 25	\$8 50
7 in. x 5 1/4 in. deep.....	25	2 00	14 00
8 in. x 5 3/4 in. deep.....	30	2 75	20 00
9 in. x 6 1/4 in. deep.....	45	4 25	31 00
10 in. x 6 3/4 in. deep.....	60	5 75	41 50

Low Pans

Inside diam.	Each	Doz.	100
5 in. x 3 1/4 in. deep.....	\$0 10	\$1 00	\$6 00
6 in. x 3 1/2 in. deep.....	15	1 25	9 25
7 in. x 3 3/4 in. deep.....	25	2 10	15 00
8 in. x 4 in. deep.....	30	3 00	22 00

Garden Jardinieres

	Each
8-in. diam. with saucer.....	\$1 50
10-in. diam. with saucer.....	2 50
12-in. diam. with saucer.....	3 50
14-in. diam. with saucer.....	5 00

The Timesaver Plant Support

Your Flower- and Vegetable-Garden's Best Friend. Placed and adjusted to height and to any size of loop almost instantly. For shrubby, tomatoes, dahlias, peonies, roses, and most other vegetables and flowers.

Length	Doz.	Postpaid	Length	Doz.	Postpaid
2 1/2 ft.....	\$0 95	\$1 05	4 ft.....	\$2 20	\$2 35
3 ft.....	1 15	1 30	5 ft.....	2 75	2 95
3 1/2 ft.....	1 60	1 75	6 ft.....	3 00	3 25
3 3/4 ft. Special Peony support.....				2 10	2 25

Sweet Pea Trellis. Frame 5 by 5 feet over all.

Made of galvanized steel. Green rope center.....

	2 50	2 75
--	------	------

Natural Green Moss, in sheets. Bag, about 2 bushels, \$2.50



Patented Jan. 23, 1917

The small holes near each corner at the top of the box are for inserting small wires or chains for hanging the box in parlors, libraries, porches, etc. Made of Armco galvanized ingot iron, which is noted for its rust-resisting qualities and will last for many years. Leak-proof and rust-proof. No transplanting—you can move Savo boxes indoors or out and have beautiful flowers and plants the year round.

MADE OF HEAVY GALVANIZED STEEL AND FINISHED GREEN, ORCHID, COBALT BLUE, CHINESE RED, OLD IVORY, OR ALUMINUM

Model	Height	Width	Length	Each	Postpaid		
A	8 in.	9½ in.	23 in.	\$3 00	\$3 20	B, Fernery, 9½ in. wide, 29 in. long, 30½ in. high; dark green	Each
B	8 in.	9½ in.	29 in.	4 00	4 20	finish, with stand.	\$10 00
C	8 in.	9½ in.	35 in.	4 50	4 75	E, Fernery, 30 in. high, 12 in. square, with stand.	6 00
D	8 in.	9½ in.	41 in.	5 00	5 25	G, Round Fernery, 12 in. in diameter, 31 in. high; dark green	
E	8 in.	12 in.	12 in.	3 00	3 15	finish, with stand.	6 00
F	12 in.	12 in.	12 in.	3 50	3 70	H, Fernery, 36 in. high, 29 in. long, with stand.	18 00

These are outside measurements, including the ¾-inch roll rim.

Special sizes made to order when required. Ask for circular

Proper Irrigation

The Perfecto Flower Box

Proper Ventilation

The Perfecto Flower Box embodies correct, approved, scientific principles for raising luxuriant plants and flowers indoors or outside. Patented system with water entrance at both ends feeds water properly at roots of plants and circulates air beneath soil; keeps it from souring. Maximum beauty in the home or on the porch and rapid growth of plants made certain in winter or summer.



Furnished in the following sizes enameled in Green finish or Old Ivory finish. Specify color desired in ordering.

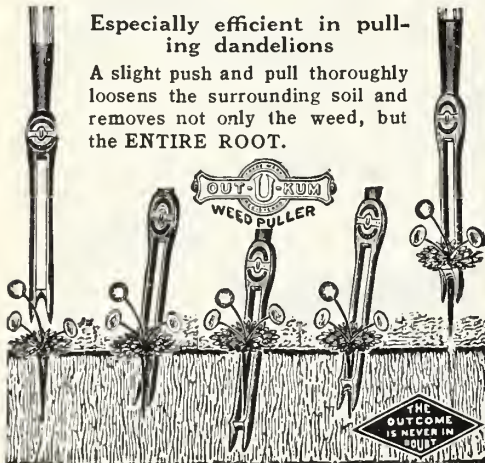
	Each	Postpaid		Each	Postpaid
20 inches long, 6 in. deep, 7 in. wide.	\$1 00	\$1 15	38 inches long, 6 in. deep, 7 in. wide.	\$2 50	\$2 70
26 inches long, 6 in. deep, 7 in. wide.	1 50	1 65	44 inches long, 6 in. deep, 7 in. wide.	3 00	3 20
32 inches long, 6 in. deep, 7 in. wide.	2 00	2 20			

The Out-U-Kum Weed Puller

Especially efficient in pulling dandelions

A slight push and pull thoroughly loosens the surrounding soil and removes not only the weed, but the ENTIRE ROOT.

It differs from all other Weed Pullers, most of which either cut the root or grip the weed above the ground, often breaking it off above the root. The Out-U-Kum Weeder is not a novelty, but a practical working tool. The illustration shows how easy it is to use, also how the weed is entirely removed. Price 75 cts., postpaid 85 cts.



Cedar Plant Tubs

The Richmond Style Tree Tubs are made of seasoned, selected Virginia white cedar, are bound with electric welded wire hoops (galvanized), three hoops to each, except the No. 1 size which has two. The Richmond style fills a long-felt want for a cheap type of Plant Tub and is being used by many large florists in place of earthen pots. These Plant Tubs are nicely painted with the best oil paints—a handsome green color inside and out. The tops of the staves are slightly beveled, which gives them a neat, trim finish. Regularly furnished with no handles.



Size	Inside top diam.	Inside bot. diam.	Inside depth	Each
No. 1	6 in.	5 in.	6 in.	\$0 65
No. 3	8 in.	6 in.	8 in.	75
No. 5	10 in.	7½ in.	9 in.	85
No. 7	12 in.	9 in.	11 in.	1 25
No. 9	14 in.	11 in.	13 in.	1 90
No. 11	16 in.	12½ in.	15 in.	2 25
No. 13	18 in.	14½ in.	17 in.	3 25

If stamped steel handles are desired, add 25 cents per tub, extra

Little Giant Self-Setting Mole Trap

SIMPLEST—SUREST—SAFEST

It is made of all steel and heavily tinned, which makes it a very attractive as well as a durable trap. The spears are made of spring steel and are therefore smaller than those made of soft steel, piercing a mole more easily.

16½ inches in height over all, 4½ inches wide, made of ⅝-inch band steel. Price, \$1; postpaid \$1.20.



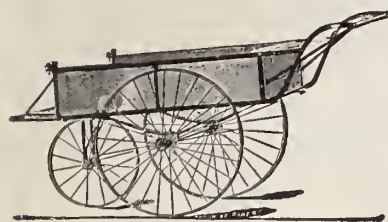
Mo-Lo

A preparation for the extermination of moles. The smell of MO-LO attracts the moles, they eat it and die underground, leaving no odor. Keep MO-LO away from children and domestic animals, as it is poisonous. Pkg. (1 doz. tablets) 25 cts., doz. pkgs. \$2.75.

Mologen

A non-poisonous preparation in meal form for the extermination of moles. ½-lb. can 50 cts., postpaid 60 cts.; 1½-lb. can \$1.25, postpaid \$1.35.

The Monitor Hand-Cart



In the Monitor Hand-Cart we offer a strong and durable Cart made of selected materials. On account of its design, correct balance has been secured without sacrificing strength. The frame of body is made of carbon steel, with first-quality bass-wood box inside.

No. 333. Drop End Board. Size, inside of body, 39 x 24 in.; depth, 9 1/2 in.; wheels, 26-in. side, 14-in. front. Capacity, 350 lbs. Price, with 3 Steel Wheels, \$20; with Wood Wheels, \$24.

No. 53. Drop End Board. Size, inside of body, 40 x 26 in.; depth, 9 1/2 in.; wheels, 30-in. side, 18-in. front. Capacity, 400 lbs. Price, with 3 Steel Wheels, \$21.50; with Wood Wheels, \$25.

Pittsburgh Garden Barrows



These Barrows are made of thoroughly seasoned wood, have double frames, firmly bolted together and iron braced. They are neatly finished and very strong.

No. 1. Large. Body, 30 x 24 in.; sideboards, 12 x 30 in.; wood wheel, 1 3/4 x 22 in. Price \$8.50.

No. 2. Medium. Body, 28 x 20 in.; sideboards, 12 x 27 in.; wood wheel, 1 3/4 x 20 in. Price \$7.

No. 5. A high-grade, well-made Barrow at a low price. Will give good service for a long time. Body, 26 in. long, 19 in. wide front, 23 in. wide rear; sideboards, 12 in. high; handles, 56 in. long. Steel wheel. Weight, 50 lbs. Price \$5.45.

Steel Tray Barrows



No. 21. Utility Barrow. An exceptional Barrow for light work and general use around the home and garden. Tray of one-piece steel. Channel steel legs. Steel wheel 15 1/2 in. diam. Capacity, 2 1/2 cu. ft. Weight, 45 lbs. Price \$4.75.



No. 15A. Contractors' Barrow. Designed with round front tray for cement or construction work, so that materials will dump and clean easily. Hardwood handles, steel tray, and steel legs. Steel wheel, 15 1/2 in. diam. A substantial Barrow that will stand a lot of hard usage. Weight, 65 lbs. Capacity, 3 1/2 cu. ft. Price \$7.

No. 17B. (Not illustrated.) Similar to No. 15A in construction, but tray is made straight across at front instead of round. Capacity, 3 1/2 cu. ft. Weight, 65 lbs. Price \$7.

No. 18. (Not illustrated.) Same construction as No. 17B, but larger. Capacity, 4 1/2 cu. ft. Weight, 70 lbs. Price \$8.25.

Simplex Green Weatherproof Plant Labels

Rose - Los Angeles

Used for identifying roses, dahlias, and other plants. Copper wired. Steel Stylus for marking free with 100 or more labels.

	Doz.	100		Doz.	100
No. 31. 3 x 1/2 in.	\$0 40	\$2 50	No. 32. 4 x 3/4 in.	\$0 60	\$4 00
No. 33. 5 x 1 in.	85	5 50	Steel Stylus, 20 cts. each.		

Simplex Weatherproof Garden Labels

White celluloid cards and genuine mica covers, with stakes 24 inches long.

	Each		Each
No. 10. 2 3/4 x 1 1/2 in.	\$0 25	No. 11. 3 x 2 in.	\$0 30

Little Wonder Hedge Trimmer



Top Cutting

Makes hedge-cutting a positive pleasure. Trims every variety of hedge grown. Accomplishes as much in one hour in the cool of the day as can be done in ten hours with hand shears.

Guaranteed to cut from five to ten times faster than hand-shear method and to do better work—more even.



Electric-Driven Trimmer

The last word in modern hedge-trimming, barring none.

Sturdily built—simple in construction. Weight of machine from ten to sixteen pounds, according to size.

Will trim any shape desired, square, round or pivot.



Side Cutting

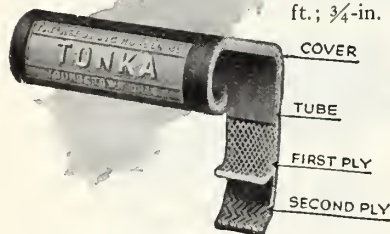
Thousands in use in the United States and foreign countries. Ask for special circular.

	Electric	Hand-driven
27-inch Hedge Trimmer.....	\$65 00	
30-inch Hedge Trimmer.....		\$25 00
40-inch Hedge Trimmer.....	106 50	27 50
60-inch Hedge Trimmer.....	114 00	35 00

Lawn Clipper Attachment for Hedge Trimmers.....	\$18 00
Side-Cutting Carriage for Hedge Trimmers.....	4 50
30-inch Lawn Weed Clipper, complete.....	35 00
40-inch Lawn Weed Clipper, complete.....	40 00

Garden and Spray Hose

Fairway. Constructed of special Hose-cords chosen for flexibility and toughness, these cords being braided with scientific and mathematical precision to produce a light, strong, flexible body. Built to withstand hard usage and will give years of good service with ordinary care. Cover and tube made of the highest quality material. Money cannot buy a better Garden Hose. $\frac{5}{8}$ -in. diam., 25-ft. length, \$4.75; 50-ft. length, \$9. Couplings included. $\frac{3}{4}$ -in. diam., 25-ft. length, \$5.25; 50-ft. length, \$10. Couplings included. Can furnish any continuous length up to 500 feet of either size. $\frac{5}{8}$ -in. diam., 18 cts. per ft.; $\frac{3}{4}$ -in. diam., 20 cts. per ft.



Tonka. A high-quality, 2-ply, molded and braided Garden Hose. It is a well-known Hose, and is "built to stay alive." We can highly recommend it. $\frac{5}{8}$ -in. diam., 25-ft. length, \$3; 50-ft. length, \$5.75. Couplings included.

Relief. Medium-weight, 2-ply, molded and braided Garden Hose. The construction and cover-stock are identical with that of Tonka, the difference being in the weight of cord used for the body. $\frac{5}{8}$ -in. diam., 25-ft. length, \$2.50; 50-ft. length, \$4.75. Couplings included.



Relief High-Pressure Spray Hose. Made specially for spraying materials. Best quality, 3-braid construction. Will stand 500 pounds' working pressure. A strictly first-class Hose for power sprayers. Any desired length. $\frac{1}{2}$ -in. diam., per ft. 25 cts.

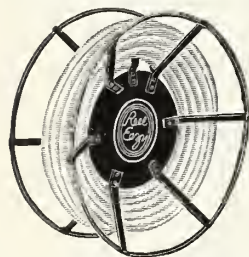
Republic Spray Hose. For use with Hand Compressed-Air Sprayers, single-braid construction. Any desired length. $\frac{3}{8}$ -in. diam., per ft. 12 cts.

Reeleezy Hose Reel

Put the socket of a hose in the ring and roll along. The hose comes right with you. One motion. Just roll. When you get to the end of the line, pick it up, hang it up, or stand it in the corner out of the way.

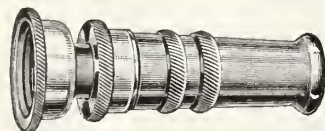
Holds 75 feet of $\frac{3}{4}$ -inch, or 100 feet of $\frac{5}{8}$ -inch, garden hose.

It will stand more hard knocks than it will ever get in ordinary service. Price \$2, postpaid \$2.20.



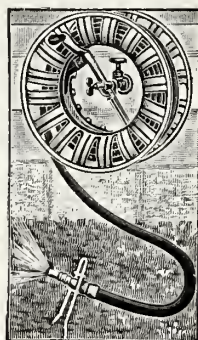
Detachable Hose Reel

A most convenient and practical device. The axle of the Reel fits into a special faucet which is permanently attached to the water-pipe. The Reel revolves on the faucet, allowing the hose to be pulled out as desired in any direction while the water is running. When the sprinkling is finished, the hose can be reeled up readily without any handling. Diameter, 20 inches; width, $8\frac{1}{2}$ inches; holds 100 feet of $\frac{5}{8}$ -inch hose. Price, including faucet \$4.25, postpaid \$4.50. Extra Faucets, each \$1.35.



Peoria Nozzle

Can be adjusted from a fine spray to a strong, solid stream. These Nozzles are chromium plated and every one guaranteed. Price 50 cts., postpaid 60 cts.



RIP, The Master Rainmaker

A self-adjusting, simple, and efficient lawn sprinkler. Has only one moving part, will not clog or corrode. Just stick the spike in the ground, turn on the water and see the 50-foot diameter circle of perfect raindrops on 50 pounds pressure. Will operate efficiently on as low as five pounds pressure.

Spike Model. Attaches to end of hose. \$1, postpaid \$1.10.
Series Model. For use when more than one sprinkler is operated on the same line. \$1.25, postpaid \$1.35.



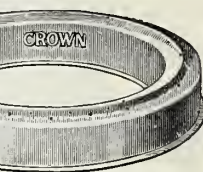
Greenhouse Spray

Used principally for watering in the greenhouse and hotbeds. Made of cast brass with $\frac{3}{4}$ -inch hose thread. Equipped with two brass plates, one fine and one coarse. Diameter of face 4 inches. Price \$2.75, postpaid \$2.90.



Flaring Rose Sprinkler

Ejects a sheet of tiny jets that are just like gentle rain. Especially adapted for sprinkling flowers, seed-beds, and new-made grass-plots; also for use in greenhouses. Made entirely of brass. Price 60 cts., postpaid 70 cts.



Crown Fountain Sprinkler

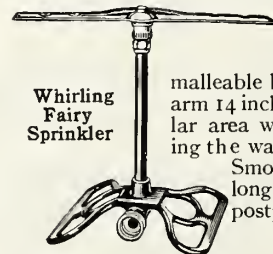
Four series of clean-cut holes give perfect distribution and throw far out and to a great height a complete circle of beautiful, mist-like spray. Made of brass. Price 80 cts., postpaid 90 cts.



Crescent Fountain Sprinkler

Same as Crown Sprinkler, except throws the water in a half circle. Price 70 cts., postpaid 80 cts.

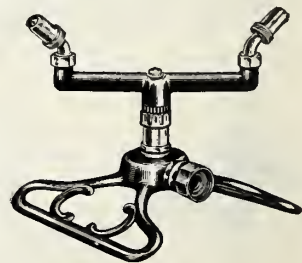
Whirling Fairy Sprinkler



Built strong, with non-tipping, malleable base, 8 inches square. Brass sprinkling arm 14 inches long. Will sprinkle a 50-foot circular area with 40-pound pressure, but by adjusting the water-flow it will sprinkle a smaller area. Smooth-running double bearing insures a long period of usefulness. Price \$1.50, postpaid \$1.65.

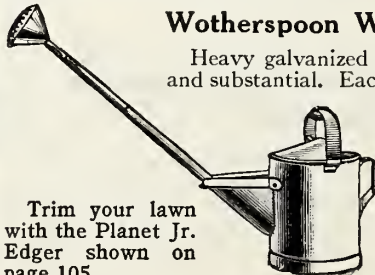
Parkside Lawn Sprinkler

Can be quickly changed from a revolving Sprinkler to a stationary Sprinkler. Nozzles can be adjusted for a fine mist or coarse stream, and to cover a large circle or small area. Will operate on high or low pressure. Price \$2.50, postpaid \$2.70.



Wotherspoon Watering Pots

Heavy galvanized iron, reinforced; well made and substantial. Each pot has a long spout, with one fine and one coarse rose. Will outlast two or three ordinary pots.

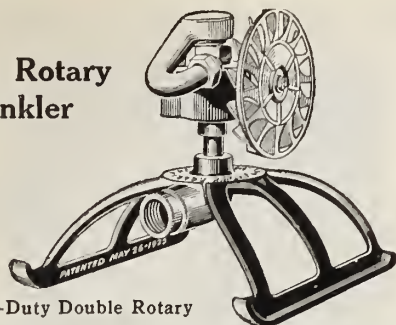


Round Pattern.

8-quart.....\$4 25
10-quart..... 5 00
12-quart..... 5 50

Trim your lawn with the Planet Jr. Edger shown on page 105.

Double Rotary Sprinkler



Heavy-Duty Double Rotary

Constructed of best materials, brass housing, aluminum water-wheel, bronze and steel gears running in oil. Adjustable nozzle, sprinkles a circular area up to 80 feet in diameter. Nothing to get out of order and will wear for years.

Junior Model. Designed especially for the home-owner. Price \$7.50, postpaid \$7.65.

Heavy-Duty Model. Used extensively by large estates, golf clubs, etc. Price \$12.50, postpaid \$12.75.



Waterfan in Operation

The Waterfan Lawn Sprinkler

A portable, automatic, oscillating lawn and garden Sprinkler. Operated by a strongly built turbine motor. Covers an area 40 by 45 feet. Works best on 25-pound water-pressure, but will work on higher or lower pressure. Price \$16, postpaid \$16.25.

The "Rain Wave"

A MINIATURE SKINNER SYSTEM

This compact, sturdily built unit spreads a fan-shaped spray over a space 50 to 60 feet in width. The strong, dependable motor waves the spray slowly back and forth over a space 50 to 60 feet in length.

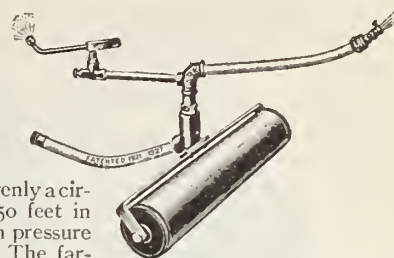
You can depend on efficient watering over 2,500 to 3,600 square feet of lawn or garden at one setting.

This miniature system weighs only seventeen pounds. A small valve stops the oscillator at any desired point. By a simple adjustment, the length of space watered can be varied from the maximum of 60 feet down to 12 feet.

Does its best work on 30 to 40 pounds and uses only 4 gallons of water per minute. Price \$35.

The "Lark" Sprinkler

For Golf Greens and Fairways, Parks and Large Estates



The "Lark" sprinkles evenly a circular area from 60 to 150 feet in diameter, depending upon pressure and size of nozzle used. The far-throwing main stream revolves slowly and may be broken into coarse or fine drops as desired. The whirling Rotor gives even distribution in the center. The roller base prevents damage to greens and allows changing position without shutting off the water. Length of roller, 18 inches. With each Sprinkler one $\frac{1}{8}$ -inch and one $\frac{1}{4}$ -inch Nozzle are furnished. Fitted with 1-inch and $\frac{3}{4}$ -inch hose-connection. Price \$15.

White Showers Rainbow Sprinkler

The Rainbow Sprinkler is so designed that it sprinkles in a square instead of a circle—a great advantage, as it does away entirely with the necessity of finishing the watering with a hose.

The Rainbow has 17 nozzles, mounted on an oscillator. Its sweep is so wide that it waters an area as large as 60 square feet, but it can quickly be adjusted for smaller areas and also for watering narrow strips and borders. Mounted on wheels—easy to move. A high-grade, durably built Sprinkler that will give years of service with no other attention than oiling once a year. Weight 25 lbs. Price \$40.

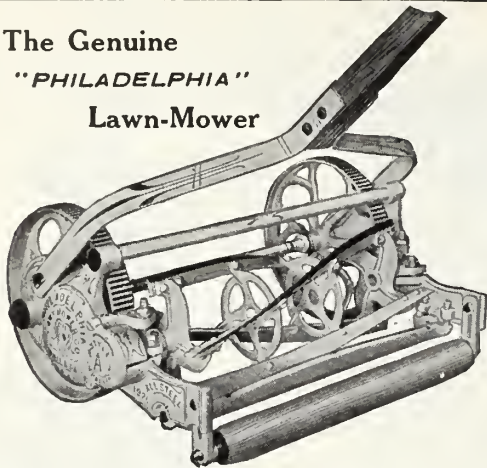


The "Ready Rainer"

Here is the solution of your watering problem for garden, lawn, and borders—a scientific irrigation line that you can move in a jiffy wherever you want it. Made of $\frac{3}{4}$ -inch galvanized pipe, fitted at 2-foot intervals with the famous Skinner System Silver Stream Nozzles. Can be attached to your hose and at ordinary city pressure covers a strip 50 by 18 feet. Made in two 9-foot sections, connected by a patented coupling which you can put together with your hands. Furnished complete and ready to erect. Three pointed iron rods support the line—push them into the ground, attach the hose, and turn on the water. With each line we furnish a set of special nozzles, which will break the water into a very fine spray. The fine spray nozzles in the line cover a strip 30 feet wide—15 feet on either side. Price complete \$11.



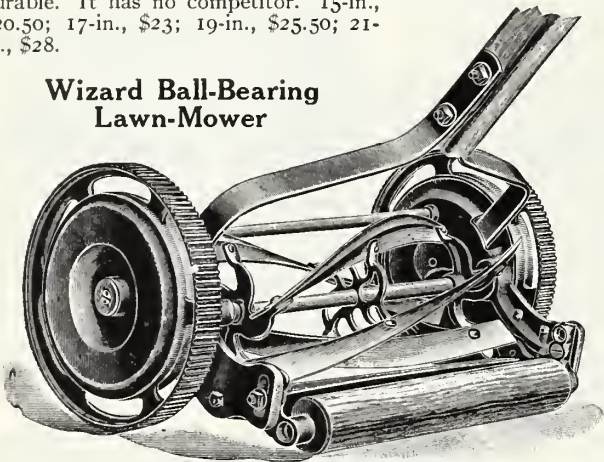
The Genuine "PHILADELPHIA" Lawn-Mower



Four blades, 10-inch wheel, 6½-inch cylinder, train of three gears, double ratchet.

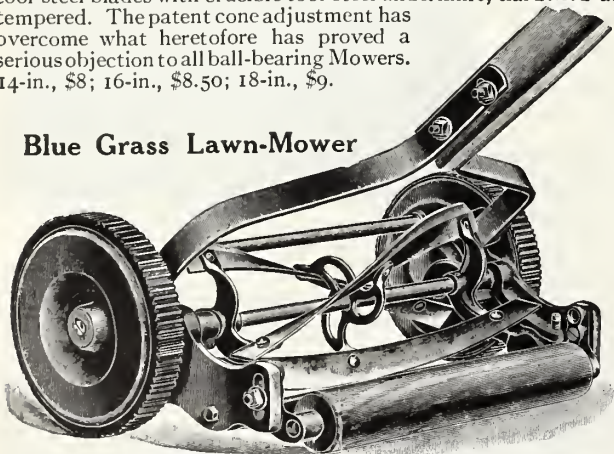
Style "A" All Steel. This is the lightest draft Lawn-Mower made, and, being made entirely of steel, it is by far the most durable. It has no competitor. 15-in., — \$20.50; 17-in., \$23; 19-in., \$25.50; 21-in., \$28.

Wizard Ball-Bearing Lawn-Mower



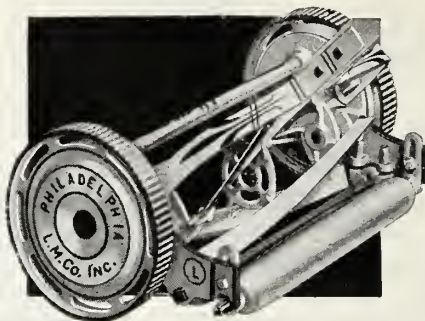
In the Wizard we offer a high-grade Lawn-Mower at a low price. It is equipped with 9-inch drive wheels, four tempered tool-steel blades with crucible tool-steel underknife, hardened and tempered. The patent cone adjustment has overcome what heretofore has proved a serious objection to all ball-bearing Mowers. 14-in., \$8; 16-in., \$8.50; 18-in., \$9.

Blue Grass Lawn-Mower



The Blue Grass Lawn-Mower has 8-inch drive wheel, shaft ½-inch diameter in adjustable plain bearing box, and three tempered tool-steel knives on reel. In the Blue Grass Lawn-Mower we have the best value that has ever been offered in a low-price machine. 12-in., \$5.75; 14-in., \$6; 16-in., \$6.25; 18-in., \$6.50.

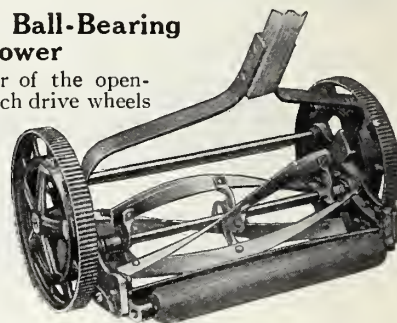
Philadelphia Lawn-Mower—Style L



A well-built Mower for use on small lawns—light in weight and draft. It has 8-inch drive wheels, four crucible steel blades and flat sliding-pawl ratchets. It can be depended upon in every respect, and is guaranteed for materials and workmanship. 14-in., \$8.50; 16-in., \$9.

The Pittsburgher Ball-Bearing Lawn-Mower

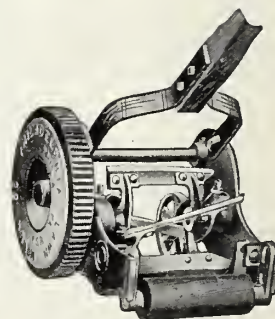
A ball-bearing Mower of the open-wheel design. Has 10-inch drive wheels and four alloy steel revolving blades. A light-weight, easy-running Mower, capable of good work and built of good materials by experienced workmen. Lipped, self-sharpening underknife of high carbon steel, hardened and carefully tempered. 14-in., \$7.25; 16-in., \$7.50; 18-in., \$8.



Genuine "PHILADELPHIA" Lawn-Trimmer

Cylinder with 4 blades; driving wheel, 8 inches; single pinion; cuts within ¼-inch of edge; diameter of cylinder, 5½ inches.

An efficient and complete Lawn-Trimmer, built for durability and service. Positively cuts smoothly to ¼-inch of wall, post, tree, or fence. Used throughout the world in cemeteries, parks, and large estates. Vanadium crucible steel blades. Use of shears or sickle unnecessary. 6-inch, \$9.75.



Easy-Emptying Grass-Catchers

Galvanized sheet-steel bottom, heavy-weight duck sides. Sides are firmly fastened to the bottom by two folds of steel.

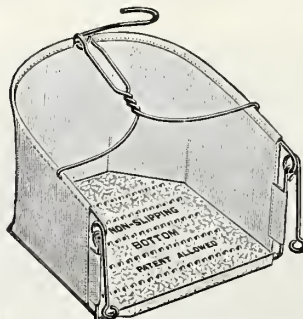
Furnished with convenient, well-balanced easy-emptying handle. Projections on the bottom prevent grass from slipping forward while mowing.

No. 10G. Depth 19 in., fits 12 to 18-in. Mower. \$1 15

No. 12G. Depth 21 in., fits 16 to 22-in. Mower. 1 45

No. 10G and No. 12G We also offer a Catcher of medium-weight duck sides, but it hasn't the non-slipping bottom. (Not illustrated.)

No. 16G. Depth 16 in., fits 12 to 17-in. Mower. \$0 75
No. 18G. Depth 16 in., fits 16 to 20-in. Mower. 90



PENNSYLVANIA QUALITY LAWN-MOWERS

The best materials only enter into the construction of **Pennsylvania Mowers**. All blades are crucible steel, oil-hardened and tempered. Castings are machined on jigs, to insure accuracy; this, with high-class workmanship and rigid inspection, has given the **Pennsylvania** line a world-wide reputation for quality.



Pennsylvania Fairway

(1932 Improved Model) Net Weight

	Price
Quint (5-units), 12-foot cut (with tractor-hitch) 1310 lbs.	\$633 00
Trio (3-units), 7-foot cut (with tractor-hitch) 805 lbs.	380 00
Trio (3-units), (equipped for 1- or 2-horse pull) 405	00
Spare Units, 30-inch cut. 185 lbs.	112 00

For units with 6 knives, add \$5 per unit.

Illustration shows **Pennsylvania** Tractor drawing **Quint Fairway Mower**, with end units raised to permit entering narrow gates, crossing bridges, etc.

The **Trio** is same machine without the two end units, supporting frames and lifting device.

All units are alike and interchangeable in any position. The rear of the units can be raised and cylinders idled, for convenience in moving from place to place.

Pennsylvania Tractor

The only six-cylinder golf Tractor on the market. It is converted from a 1931 Chevrolet Light-Truck Chassis, cut down to 87-inch wheel-base, with gearing reduced to 18 miles per hour. Standard demountable steel disc wheels, 10-inch tread, with spuds, are on rear. Regular pneumatic-tire wheels can be supplied if wanted. This Tractor has tremendous power, with minimum vibration, and is practically noiseless.

Weight 1,800 pounds. Price \$735.

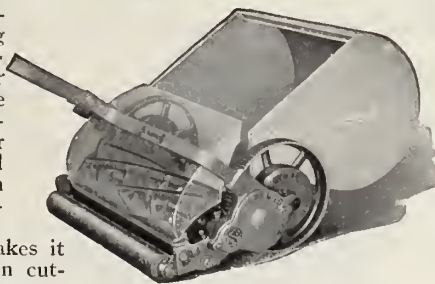
A light Dump Cart, suitable for the Tractor, of 1 cu. yd. capacity can be supplied. Price \$80.

These Mower units, also the castings on the frames, are malleable iron; the only **Fairway Mowers** now made that are **unbreakable**, adding years to their life. A train of 3-cut gears on both sides, in dirtproof cases, Timken roller bearings, with a unique adjustment to take up any wear, on cylinder, hardened steel ball-and-socket bearing on ground roller. Alemite lubrication throughout. Five blades; 7-inch diameter cylinders; double raised edge lower knife; wheels 17 inches; 2½-inch tread; with Timken roller bearings.

Pennsylvania New Aristocrat

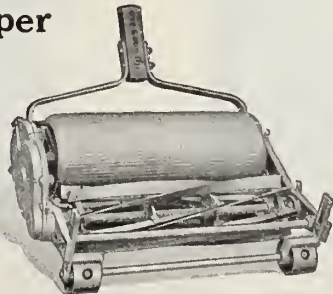
A still lighter-running, smoother-cutting model of the world-famous **Aristocrat** or **Pennsylvania Golf**, the "old-reliable" high-wheel greens Mower which has been used for years by green keepers in every country where golf is played. Its higher gearing makes it particularly efficient in cutting creeping bent greens.

The Cylinder has 7 blades, high speed for smooth cutting, self-aligning ball-bearings driven by a train of 3-cut gears on both sides. 19-inch. Net wt. 58 lbs., \$40; Grass Box, extra, \$8.



Pennsylvania Super Roller Mower

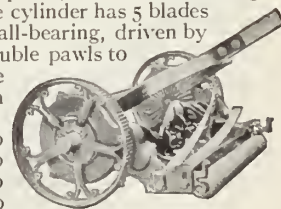
A precision Mower, designed especially for the smooth, ridgeless close cut necessary on the modern putting green. Seven blades; high-speed cylinder; self-aligning ball-bearings; three-cut gears; triple pawls; Alemite lubrication. Driving drums are aluminum, 7 inches in diameter, that give a polish after cutting. 18-inch. Net wt. 58 lbs., \$50; Grass Box, \$8; Carriage, \$5.



Pennsylvania Junior

This is the standard Mower for general trimming, and probably is used on more private estates, parks, cemeteries, and golf courses than any other Mower. The cylinder has 5 blades 6 inches in diameter; self-aligning ball-bearing, driven by a train of 3 gears on both sides; double pawls to prevent slipping. It will cut the toughest grass and give a smooth finish.

	Weight	Price
15-inch.....	41 lbs.	\$24 00
17-inch.....	43 lbs.	27 50
19-inch.....	45 lbs.	31 00
21-inch.....	48 lbs.	34 50



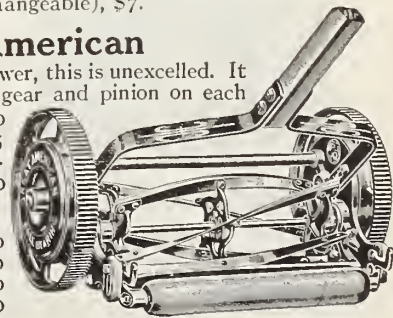
Pennsylvania Greens Sweeper

Equipped with three revolving brushes, this is excellent for brushing the golf greens and is beneficial to creeping bent grass. When fitted with three rakes, it will clean up lawns of leaves, litter, etc., saving the labor of four men with hand-rakes. (Not illustrated.) Net wt. 62 lbs. 24-inch, \$30; Extra set of Brushes or Rakes (quickly interchangeable), \$7.

Great American

As a general utility Mower, this is unexcelled. It is driven by an internal gear and pinion on each side, making it easy to push. The cylinder has 5 blades; self-aligning ball-bearings. Wheels are 10 inches in diameter.

	Weight	Price
15-inch... 38 lbs.		\$16 50
17-inch... 40 lbs.		18 50
19-inch... 42 lbs.		21 50
21-inch... 45 lbs.		24 50



All prices F. O. B. Pittsburgh. Catalogue on request

and Now

MOTO-MOWER

Presents its Finest Achievement

THE SUPER-DETROIT

FOR fourteen years the Moto-Mower Company has built machines that surpassed all other makes of power lawn-mowers. So, when they say that the new **Super-Detroit** (27-inch cut) is incomparably the greatest buy the industry has ever seen, that statement means something. It means more power and stamina than you'll ever need, trouble-free performance year after year, automatic speed-control through thick grass and thin, twist-of-the-wrist guiding for easy steering, and virtual elimination of maintenance expense.

Its new 2-horsepower motor is an exclusive Moto-Mower scoop. It's built rugged and simple, for years of hard wear and heavy duty.

Possessing all these superior qualities, the **Super-Detroit** also retains all the features that made the **Detroit** model such a universal favorite. It will cut 3 to 5 acres a day with ease.

The **Super-Detroit** is standard equipped with 14-inch cast-iron wheels. Rubber-tired wheels and sulky furnished if desired.

Ask to have this machine demonstrated on your own lawn. You absolutely won't be obligated to buy, but we're confident that, once you see this model at work, you'll let no other machine but a **Moto-Mower** cut your grass.



\$280
Delivered

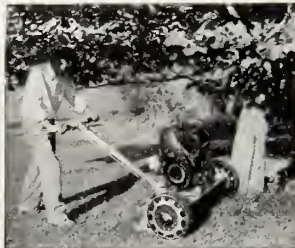
A Twist-of-the-Wrist Guides It

27-in. cut



Climbing Steep Grades

Steep terraces are child's play for the **Super-Detroit**. This machine is built to cut all your lawn, not to shirk on the difficult spots and brag on the straight-aways.



Turning in Small Areas

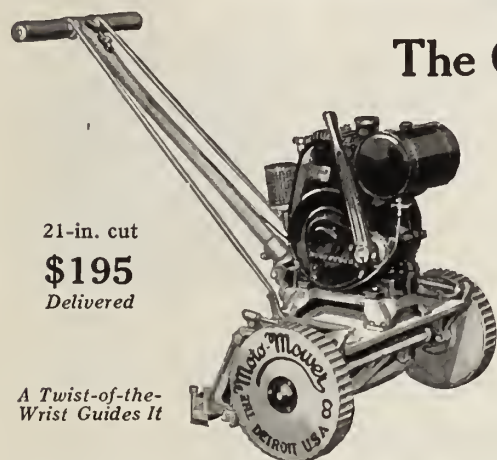
The powerful **Super-Detroit** is as nimble around tree-trunks and flower-beds as a hand mower. Twist-of-the-wrist guiding, an exclusive **Moto-Mower** feature, insures quick, easy turning.



Mowing Large Lawns

The **Super-Detroit** can cut 5 acres of lawn on 1 gallon of gasoline. Tough stock makes no difference. Automatic Engine Control maintains an even cutting speed.

The 1932 Moto-Mower Line Contains the Greatest Power Mower Values Ever Offered to the Public!



21-in. cut

\$195

Delivered

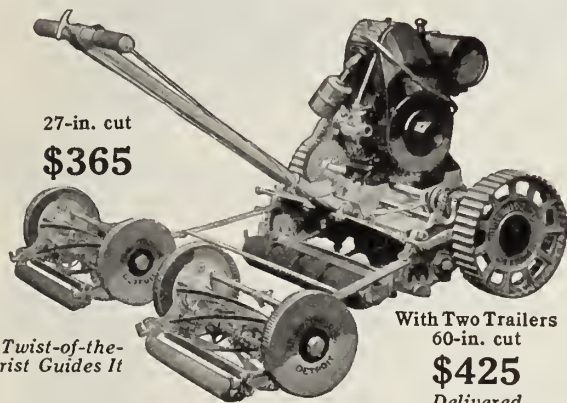
A Twist-of-the-Wrist Guides It

The CITY Moto-Mower

For smaller lawns, the City model Moto-Mower, 21-inch cut, has proved a splendid machine. It will efficiently and easily mow $2\frac{1}{2}$ to 3 acres of grass per day. Possessing twist-of-the-wrist guiding, automatic engine control, and the finest construction and materials, the City model is just as valuable and efficient a machine as the larger Moto-Mowers. A hand-lever makes starting easy. A rugged motor and simplified design guarantee years of thorough, economical operation for the City model owner.

Important! Automatic speed-control, which the City model possesses in common with all the other Moto-Mowers, enables the operator to set the engine at any speed he desires and, by means of an automatic governor, the machine will run at that speed through all grades and thicknesses of grass, assuring an even, scientific cut with least exertion to the operator.

THE 3-WAY Moto-Mower



27-in. cut

\$365

A Twist-of-the-Wrist Guides It

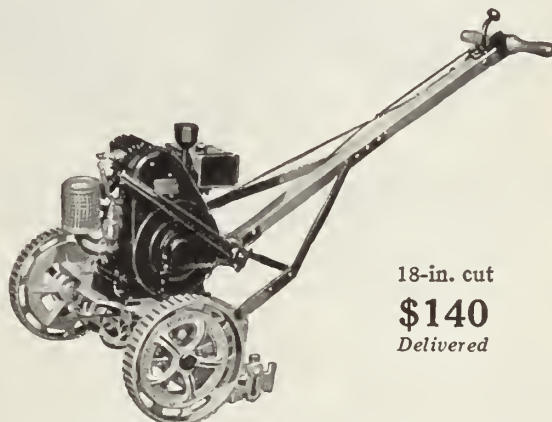
With Two Trailers
60-in. cut

\$425

Delivered

Here's a machine that will efficiently and economically mow lawns of country estates, parks, and golf clubs. Equipped with trailers, it cuts a 60-inch swath, 20 acres a day, consuming only 2 gallons of gasoline. Twist-of-the-wrist guiding makes handling easy. Automatic engine control, safety clutch, drop-out reel, finest materials, sturdy construction and numerous other features make the 3-WAY model a *de luxe* machine in every way. There's no mowing job too great or too difficult for the 3-WAY!

THE JUNIOR Moto-Mower



18-in. cut

\$140

Delivered

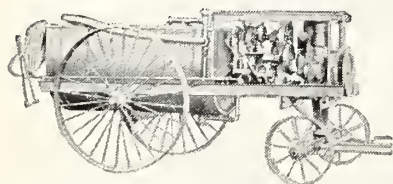
You'll never return to hand-mowing once you walk behind a Junior model Moto-Mower, 18-inch cut. Power lawn-mowing is effortless and efficient, and the Junior model is such a durable machine that low maintenance expense adds pleasure to the ease of Moto-Mowing. Automatic engine control, light weight, and low cost make the Junior physically and financially easy to handle. This machine will cut 2 acres of lawn per day on 1 gallon of gasoline. It climbs a 35 per cent grade.

"BEAN" FRUIT AND POTATO SPRAYERS

Today it is quite unusual to enter an orchard, truck-garden, or packing-house without seeing Bean equipment of some kind, and in many cases they are Bean-equipped throughout. Others are quickly appreciating the advantages of being able to obtain their equipment from one firm and are rapidly changing over to Bean-made outfits.

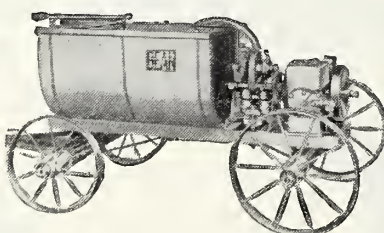
It is fine for the grower to have one source of supply for his complete equipment, and one source of responsibility. It offers a better guarantee to him of up-to-the-minute engineering and quality building in the products.

The Bean Line offers you practically anything you could ask for: Sprayers and Dusters of all kinds, Fruit-Washers, Fruit - Wipers, Fruit - Graders, Fruit - Sorters, Potato-Sprayers, Potato-Cleaners, Picking-Bags, and so forth.



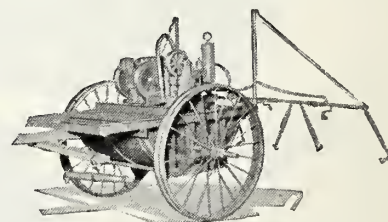
**Bean Super-Giant Junior
Sprayer, Outfit 846**

A general all-round, all-purpose Sprayer for orchard work. Medium priced, ample capacity, and high pressure. Carries all the regular Bean features which have made Bean Sprayers leaders in their fields. Has 4 horsepower engine, triplex pump, with a capacity of 12 gallons per minute at 300 to 400 pounds pressure. Carries 200-gallon tank and has 24 by 5-inch and 48 by 5-inch wheels. A wonderful efficient machine for medium-sized orchards. Price without hose and guns, \$616 f.o.b. factory.



**Bean Little Giant Duplex
Sprayer, Outfit 3106**

Many growers have a limited number of acres of fruit, yet high-grade, clean fruit means just as much to them as it does to the commercial grower with large orchards, therefore they try to give their trees the best of care. You will not be handicapped in your work as you have been in the past because this Little Giant Duplex Sprayer gives you real high pressure and efficient spraying at an investment that is in proportion to the amount of orchard to be cared for. You can now get the results you desire in efficiency, capacity, and economy at a reasonable first cost. Price without hose and guns, \$274 f.o.b. factory.



**Bean General Purpose
Sprayer, Outfit 3108-P**

Growers with average acreages of potatoes or other crops desire a medium capacity, medium-priced yet efficient Sprayer for their work. Outfit 3108-P, as shown above represents exceptional value in every respect. In the first place, it has capacity for 4-row boom and it has pressure for efficient spraying. The 4-row (3 nozzles to the row) boom works at a pressure of 250 to 300 pounds, and for orchard work with the hose and gun it maintains 300 pounds pressure easily. It has special, strong, rigid frame construction, large wheels for easy draft, and it is very close to the ground, yet allows ample clearance for row crops. Price without hose and guns, \$369 f.o.b. factory.

Prices of different types spray rods and guns and hose for these outfits quoted on request

BEAN SPRAYERS ARE BUILT IN MANY TYPES AND WITH MANY PUMP AND TANK CAPACITIES. COMPLETE CATALOGUE AND PRICES GLADLY SENT ON REQUEST

Myers Cog Gear Spray Pump Double Acting

This is our most popular Barrel Spray Pump, and is recommended to those who require a Sprayer of exceptional capacity and durability. A constant high pressure can be maintained with little or no exertion, and one man can operate this pump without fatigue.

With brass valves and ground bevel brass seats, 2-inch seamless brass removable cylinder, hemp-packed plunger, double lever shut-off discharge.

Adapted for spraying under heavy pressure, mounted complete, occupying smallest possible space. Will fit in an ordinary farm wagon box.



No. R316B, Pump complete, 50-gallon barrel mounted on skids, with pressure gauge, one 15-foot lead of $\frac{3}{8}$ -inch 7-ply discharge hose, one Fembo Fig. 1290 nozzle, one 8-foot pipe extension, with lever shut-off and mechanical agitator. Price \$54.

The Myers Portable Sprayer

With Cog Gear Spray Pump and Dasher Agitator

A handy outfit suitable for spraying trees, whitewashing, painting, etc. The tank is made of extra-heavy galvanized iron, reinforced at top and bottom by steel bands, and hung in the frame on trunnions. The pump is securely attached to the tank by means of a clamp connected direct to the channel iron that surrounds the top of the tank held in position by one thumb-screw. Pump is fitted with dasher agitator. The handle can be located at any point desired.



Equipped with 15 feet of $\frac{1}{2}$ -in. hose, 8-foot extension, and Vermorel nozzle. Capacity 12 $\frac{1}{2}$ gallons.

R336B. Single wheel as illustrated; wheel has 3-inch tire. \$25. Whitewash nozzle, extra \$1.

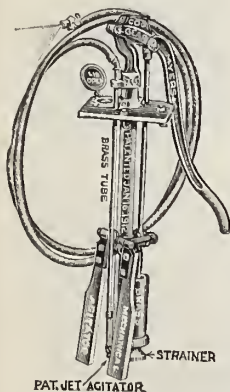
R337B. Double wheel. Particularly adapted for greenhouses, dairy-barns, and poultry-houses. Handles are short, to permit turning in narrow

alleys. Wheels have $1\frac{1}{4}$ -in. tire. Price \$25. Whitewash nozzle, extra \$1.

Myers Cog Gear Barrel Spray Pump

Cylinder, Valves, Valve Seats, and Discharge All Brass. 2-inch Cylinder

The construction is such that the entire Pump fits inside the barrel containing the liquid, being bolted fast at its upper end to the head of the barrel. By this arrangement the working parts are entirely submerged in the liquid that is to be sprayed, thereby avoiding all possibilities of losing priming, doing away with the necessity of a suction pipe, placing the agitator in the bottom of the liquid in a simple form, and also doing away with a large number of complicated parts. Base fits 8 x 8-inch hole. Has bronze ball valves and brass seats. The plunger is self-expanding.



No. R318B, Myers Cog Gear Barrel Spray Pump, with one lead of 15 feet of $\frac{1}{2}$ -inch 5-ply discharge hose, graduating Vermorel nozzle, and mechanical agitator, without barrel, \$16.

Hudson Sprayers

For work of any kind requiring a high-pressure, compressed-air Sprayer. Handles all insecticides, fungicides, disinfectants, whitewash, cold-water paints, etc. It is very practical for use around the orchard, vineyard, truck-garden, or farm; in dairy-barns, hog-houses, poultry-coops, etc.

Made of first-quality copper-bearing galvanized or brass sheets. Brass is recommended for use with corrosive solutions. All seams are riveted and soldered. Pump is made of brass and attached to tank by means of a screw top.

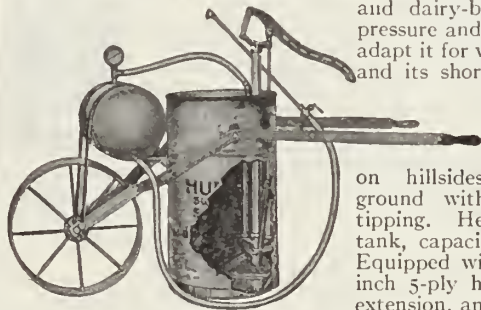
Equipped with 2 feet of 5-ply special spray hose, nozzle, and 12-inch brass extension rod as shown. Standard $\frac{1}{4}$ -inch iron pipe threads permit using a longer rod when necessary.



No. 110G. Perfection. 4-gal. Galvanized Tank....	\$6 50	Postpaid \$6 85
No. 110B. Perfection. 4-gal. Brass Tank.....	9 75	10 10
No. 140G. Junior. 2 $\frac{1}{2}$ -gal. Galvanized Tank.....	4 50	4 75
No. 140B. Junior. 2 $\frac{1}{2}$ -gal. Brass Tank.....	7 00	7 25
No. 192G. Leader. 4-gal. Galvanized Tank. Brass pump attached to tank by clamp top. Equipped with 2-foot hose and 12-inch brass extension rod. (Not illustrated.)	Price \$3.50,	postpaid \$3.85.

Hudson Sunshine Sprayers

This outfit is adapted for spraying small orchards, vineyards, truck gardens, in the greenhouse, and a very convenient and efficient rig for whitewashing and disinfecting poultry-houses and dairy-barns. Its high pressure and easy portability adapt it for work of all kinds, and its short, compact construction permits its use in close quarters.



It can be used on hillsides and uneven ground without danger of tipping. Heavy galvanized tank, capacity 12 $\frac{1}{2}$ gallons. Equipped with 5 feet of $\frac{3}{8}$ -inch 5-ply hose, 2-foot pipe extension, angle spray nozzle and pressure gauge.

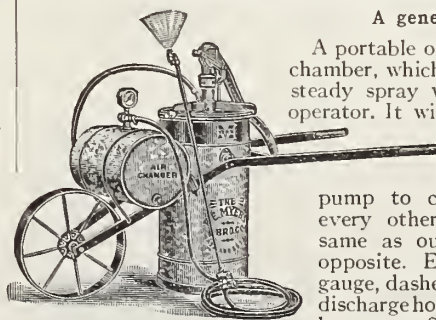
No. 37S. With air-pressure tank. As illustrated..... \$26 00
No. 36S. Without air-pressure tank. Not illustrated... 14 00

Myers Portable Sprayer

WITH COG GEAR SPRAY PUMP AND DASHER AGITATOR

A general utility outfit

A portable outfit with six-gallon air-chamber, which assists in keeping up a steady spray with less effort by the operator. It will hold the pressure and continue to spray for several minutes while the operator leaves the



pump to cover nearby trees. In every other particular, it is the same as outfit No. R336B shown opposite. Equipped with pressure-gauge, dasher agitator, 15 feet $\frac{1}{2}$ -in. discharge hose, 8-foot extension, with lever cut-off and Vermorel nozzle.

Capacity 12 $\frac{1}{2}$ gallons. No. R339B, \$40.



The Myers Compressed-Air Sprayer

The Myers Compressed-Air Sprayer is built in two sizes: 2½ and 4¼ gallons capacity (both over-size) that meet all demands for this style of Sprayer. The tank is made of heavy galvanized iron or brass. The side walls are double seamed, riveted, and soldered. The top and bottom are made of extra-heavy material. Has 1¾-inch brass tube cylinder.

The nozzle is a special feature of this Sprayer. By means of the small lever the spray can be adjusted from a broad, fine spray into a long distance spray, throwing water 20 feet. The valve is simple and effective. Can be removed instantly.

		Postpaid
No. 1296. 2½-gal. Galvanized Tank.....	\$5 00	\$5 25
No. 1296B. 2½-gal. Brass Tank.....	8 50	8 75
No. 1297. 4¼-gal. Galvanized Tank.....	5 50	5 85
No. 1297B. 4¼-gal. Brass Tank.....	9 50	9 85
Pipe Extension, with side outlet nozzle.....	1 10	1 20

Auto-Spray No. 9 Compressed-Air Sprayer

Corrugated Tank. Screw Lock

A powerful, durable, general-purpose Sprayer for spraying insecticides and disinfectants. It is an excellent machine for small trees, field crops, gardens, chicken-coops, etc. The brass screw lock is a patented feature which enables the operator to use the handle as a wrench to tighten the brass cap on the pump cylinder without revolving the pump cylinder, thereby chewing up the gasket and breaking the pressure seal.

Tank of heavy, best-quality sheet-brass or strong copper-bearing galvanized steel sheet. Air-pump of one-piece seamless brass, 2 inches in diameter, with new all-metal brass check valve. Reservoir capacity, 4 gallons. Equipped with ¾-in. diameter 5-ply hose, wire-bound. Carrying strap adjustable. Brass lever shutoff with 22-inch seamless brass extension rod and screen nozzle with extra discs.

		Postpaid
No. 9-D. Galvanized tank.....	\$6 65	\$6 90
No. 9-B. Brass tank.....	9 75	10 00

Brown's Auto-Spray No. 50

Same construction as No. 9 Auto-Spray, except the tank is not corrugated, and the brass extension rod is only 15 inches long.

Capacity, 3 gallons.

		Postpaid
No. 50D. Galvanized tank....	\$5 70	\$5 90
No. 50B. Brass tank.....	8 65	8 85

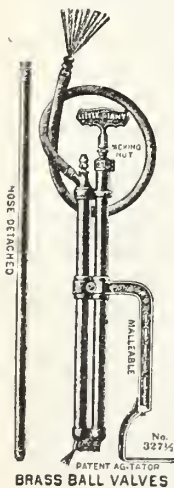
Brass Extension. Used where longer extension is required. 22 in. long (straight). 55 cts., postpaid 60 cts.

Myers Little Giant Sprayer

This Spray Pump is constructed entirely of brass. It is so arranged that the labor of pumping is all done on the downward stroke of the piston and nothing on the up. The effect of this operation while pumping is to hold the pump down. The foot-rest steadies the pump, holding it in position.

It is provided with a large air-chamber. The nozzle throws a continuous spray and is not affected by the movement of the plunger. Will throw a solid stream 50 feet.

No. 327½. Complete with hose and Imperial combination fine- and coarse-spray and solid-stream nozzle, \$3.75, postpaid \$4. Whitewash Nozzle, extra \$1.



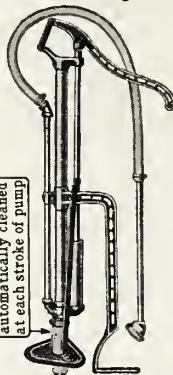
Spraying and Whitewashing Machines

Hudson Moro Spray Pump

Designed for use with whitewash, cold-water paints, and insecticides. All working parts are brass. Valves and nozzle parts easily accessible for cleaning. Cylinder of seamless brass tubing. Dasher-type agitator which operates on each stroke of pump and keeps material in solution and thoroughly cleans strainer screen.

No. 126SA. Complete with 3 feet of ¾-inch spray hose, 12-inch extension rod, and nozzle fitted with discs for spray or solid stream. \$6.40, postpaid \$6.60.

Non-clogging strainer automatically cleaned at each stroke of pump

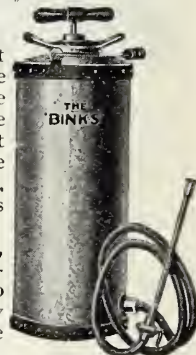


BINKS, STYLE H

A Whitewashing Machine is one of the best investments for a farmer or poultryman. The various classes of work to which the machine can be applied are almost unlimited, and the amount of work which can be performed with it in a day by ordinary unskilled labor will prove astonishing, while the expense of brushes, pails, ladders, and other tools of the painter's kit is entirely dispensed with.

Tank is of extra-heavy, galvanized steel, attractively finished, riveted down the entire side, top, and bottom, and is made to withstand pressures that would actually burst the average sprayer of this type. The applications for this Sprayer are almost without end, being adapted for all types of insecticides. Factories, industrial plants, and institutions of all kinds find this equipment an indispensable accessory for general spray applications.

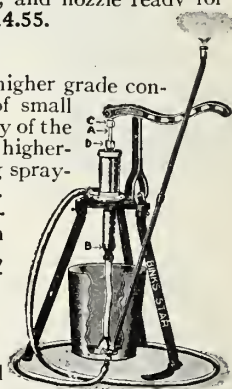
Will also be found invaluable for small classes of work, as around residences, barns, dairies, poultry-yards, greenhouses, gardens, etc. Capacity of tank, 5 gallons. Furnished complete with 10-foot, ¾-inch discharge hose, spray pipe, shut-off valve, and nozzle ready for work. Price, \$14.25, postpaid \$14.55.



Style H

BINKS, STYLE J

A bucket type Sprayer only of much higher grade construction than found in the usual run of small utility spraying machines. Will handle any of the spray solutions commonly used with the higher-priced, heavy-duty Sprayers, maintaining spraying pressures up to 100 to 150 pounds. Sprayer complete as shown in the illustration (without pail for holding liquid) with 10-foot, ¾-inch discharge hose, spray pipe, shut-off valve, and spray nozzle ready for work. Price, \$15.50, postpaid \$15.85.



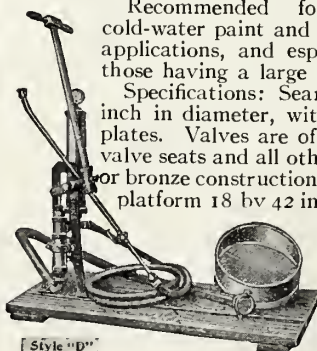
Style J

BINKS, STYLE D

Recommended for general cold-water paint and whitewash applications, and especially for those having a large amount of work to perform.

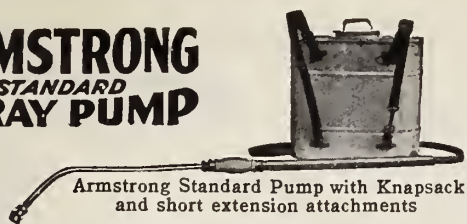
Specifications: Seamless brass tubing cylinder 1¾ inch in diameter, with cast top and bottom cylinder plates. Valves are of the bronze ball type, with brass valve seats and all other interior working parts of brass or bronze construction. Substantially mounted to wood platform 18 by 42 inches long.

Equipment: Spray-pipe with spray nozzle, extra spray tip, 200-pound pressure gauge, galvanized sieve, one length 1-inch suction hose, and one 10-foot length ½-inch discharge hose. Price, \$34.50.



Style "D"

ARMSTRONG STANDARD SPRAY PUMP



Armstrong Standard Pump with Knapsack and short extension attachments

The Armstrong Standard Spray Pump is ideal for spraying liquid insecticides of all kinds, for whitewashing poultry-houses and cattle-barns, and spraying disinfectants.

By different arrangements of the several nozzles regularly supplied, sprays of varying fineness—from a mist to a straight stream that carries 60 feet—are produced.

For bucket use, a short length of hose is supplied. To use it with barrel or tank for a larger orchard, a length of hose up to 25 to 30 feet is desirable.

For spraying young or scattered trees or truck crops, such as potatoes, the knapsack and short curved extension are used with the Pump.

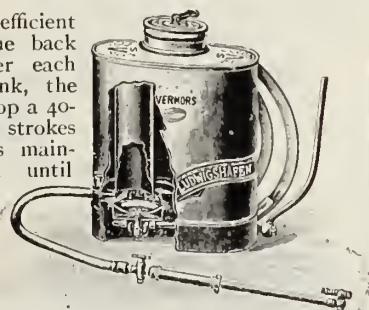
The Standard is made entirely of brass; no leather packings; no iron casting to rust or decay; nothing to get out of order.

With 3½-foot hose and full set of three nozzles.....	\$5 00	Postpaid \$5 25
Galvanized knapsack, capacity 5 gallons.....	4 25	4 50
Extension, 19 inches long.....	90	1 00
Extra hose, ½ inch, per foot.....	25	

Platz Vermors Brass Sprayer

COMPACT—DURABLE—EFFICIENT

A compact and very efficient knapsack outfit, fitting the back snugly with a strap over each shoulder. After filling tank, the diaphragm pump will develop a 40-pound pressure with a dozen strokes of the pump-lever, and is maintained with little effort until emptied. The pressure chamber is made from a solid piece of brass. The nozzle is adjustable with a cleaner attachment, and is equipped with fine, medium, and coarse spray caps, and a nozzle capable of throwing a straight steam for a distance of 40 feet. The diaphragm and two check-valves, the only working parts of the pump, are accessible, easy to replace, and inexpensive. Having no plunger-pump, it has no plunger troubles. Capacity approximately 4 gallons. Weight 16 pounds. Price \$20, postpaid \$20.40.



Myers Power Spray Guns

Designed for use with any power spray pump. Fitted for ¾-inch hose coupling and ¼-inch pipe.

Myers Triple and Quadruple Power Spray Guns produce a fine fog spray and assure complete coverage of both sides of all leaves and blossoms, using the minimum amount of spray mixture. The rod is galvanized steel tubing in three different length Guns. A very efficient Gun that will save time and labor.

No. 30 Triple Spray Gun. Complete \$8, postpaid \$8.25.

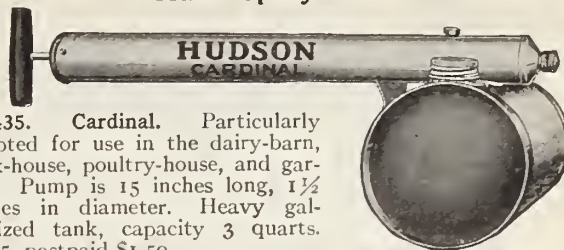
No. 40 Quadruple Spray Gun. Complete \$9, postpaid \$9.30.

No. 1. Will discharge a long-distance spray by means of which the top of the highest fruit tree can be reached, or by a slight turn of the handle the spray widens, which practically covers the tree at one shot. \$6, postpaid \$6.25.

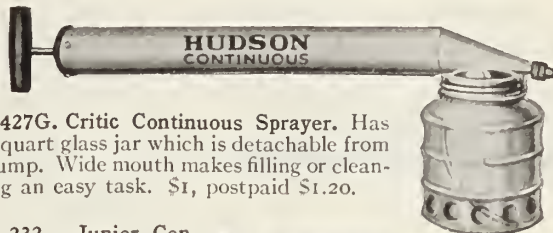


No. 1

Hand Sprayers



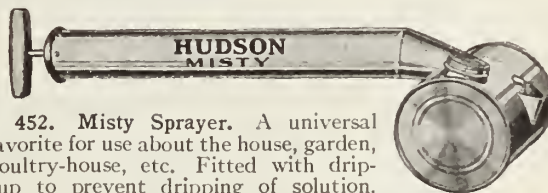
No. 435. Cardinal. Particularly adapted for use in the dairy-barn, milk-house, poultry-house, and garden. Pump is 15 inches long, 1½ inches in diameter. Heavy galvanized tank, capacity 3 quarts. \$1.35, postpaid \$1.50.



No. 427G. Critic Continuous Sprayer. Has 1-quart glass jar which is detachable from pump. Wide mouth makes filling or cleaning an easy task. \$1, postpaid \$1.20.

No. 232. Junior Continuous. Meets the demand for a small continuous Sprayer for household use. Will handle all kinds of insecticides. Well made. Capacity ¾ pint. 50 cts., postpaid 60 cts.

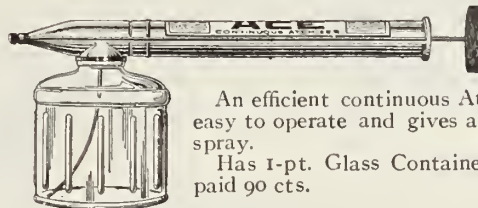
No. 432. Senior Continuous. Capacity 1 quart. 75 cts., postpaid 85 cts.



No. 452. Misty Sprayer. A universal favorite for use about the house, garden, poultry-house, etc. Fitted with drip-cup to prevent dripping of solution. Capacity 1 full quart. 40 cts., postpaid 50 cts.

No. 222. Vapor Sprayer. A small Sprayer for general purposes in and about the house. 25 cts., postpaid 35 cts.

Brown "Ace" Sprayer



An efficient continuous Atomizer which is easy to operate and gives a very fine, misty spray.

Has 1-pt. Glass Container. 75 cts., postpaid 90 cts.

Willson Dust and Spray Mask



SAVE YOUR LUNGS

Don't ruin your health. Protect your nose, mouth, throat, and lungs.

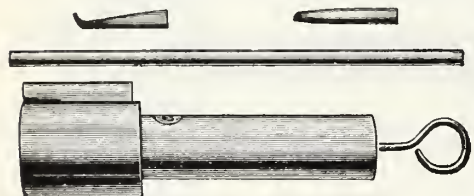
Farmers wear this mask for spraying and dusting trees and plants, threshing, tractor work, cleaning buildings, spreading fertilizers, handling crops, treating wheat for smut, using powders for cereal diseases, etc. Price \$2.25, postpaid.



Calispray Garden Dust No. 82

Contains nicotine, lead arsenate, and copper. With a can of it and a garden duster, the housewife is prepared to wage war on insect pests and fungous diseases in the garden on a moment's notice. No messing in liquids or dirtying of utensils. 4-oz. can 20 cts., 8-oz. can 35 cts., 1-lb. can 50 cts., 5 lbs. \$1.75, 25 lbs. \$7.50, 50 lbs. \$13, 100 lbs. \$25.

The Silver Beauty Garden Duster

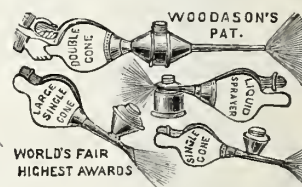


Holds 1 pound of dust. Throws a cloud of dust 8 to 10 feet. Has tube and spreader to reach ground without stooping. An ideal home-garden duster. Price \$2.50, postpaid \$2.65.

Woodason's Powder and Liquid-spraying Apparatus

For the destruction of insects, rust, smut, mildew, blight, rot, etc., in houses, gardens, orchards or fields.

Single-cone Insect Powder Bellows. Will last a lifetime; never fails completely to destroy bed-bugs, roaches, moths, mosquitoes, flies, fleas on dogs, lice on birds, animals, plants, etc. Being strong, it blows the powder well behind the woodwork and into the cracks where the insects breed in houses, hotels, camps, henneries, greenhouses, hospitals, schools, jails, police stations, asylums, poorhouses, etc. Single-cone Powder Bellows, small size, \$3; large size, \$4.75. Liquid-spraying Bellows, small size, \$4; large size, \$4.75; postage 25 cts.



Acme Single Powder Gun

Consists of a tight, valveless bellows equipped with a distributing tube, or nozzle, a funnel, a spreader for diffusing the spray, and an elbow for placing the spray on the under side of the leaves. Handles of convenient length; bellows of fine russet leather. A practical, efficient method of applying the principles of dry spraying by hand, at a reasonable price. \$1.50, postpaid \$1.75.

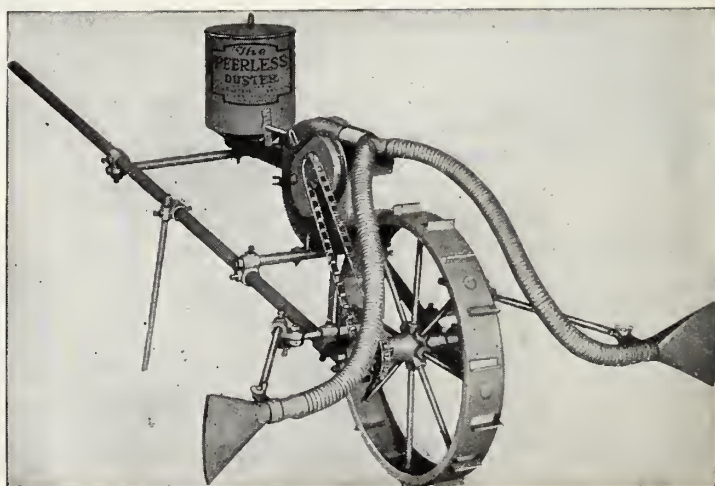


The Peerless Mixer

A wonderful machine for home mixing of insecticide dusts, or to lighten up ready-mixed dust and break up any lumps that may possibly have formed in it. It is a labor-saver, easy to manipulate, takes up little space, and is always ready for use. You can save time, money, and patience by using the Peerless Mixer.

Another purpose for which the Mixer is used is by poultry-raisers who desire to mix their own scratch-feed or mash. It can also be used for treating seed-grain. It is intended for dry mixtures, but a slight moisture will not interfere with its efficiency.

The size of the drum is 16 by 24 inches, and stands 35 inches high when set up. Weight 60 pounds. Capacity about 1 bushel. Price \$20.



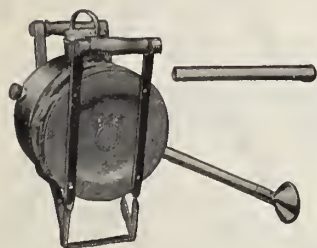
Peerless Traction Crop Duster

A wonderful aid to the grower with 1 to 3 acres of row-crops to be dusted at one time. This one-man, push-type Duster permits the operator to walk at an ordinary pace and develop a complete dust-fog that envelops the crop being treated. The weight of the Duster and material is carried by the wheel. Nozzles may be set to dust both sides of one row, one side of each of two rows, down on top of two rows completely, or the under sides of one or two rows completely. Nozzles are adjustable to rows from 6 to 48 inches apart and in heights from ground to 36 inches. This Traction Duster is just the thing for the truck-gardener, potato-grower, nurseryman, florist, or estate-owner. Weight 60 pounds; capacity of hopper, 9½ pounds of lime. Price \$45.



Platz Green Double-Action Duster

Fits the back snugly, with a strap over each shoulder. Through the elimination of gears, practically no muscular effort is required to operate the Duster and obtain the most efficient results. The 44-inch discharge pipe, with its adjustable spreader, is sufficiently long to dust the underneath side close to the ground, as well as to throw a cloud of dust 20 feet in the air. Its large carrying capacity eliminates loss of time in repeated fillings. The agitator will thoroughly crush sulphur, and works perfectly with all standard dusting materials. Regulator is easily adjusted, and may be set for a light or heavy application. The double bellows insures a steady flow of dust, and is better adapted for dusting a denser growth of foliage. Weight 17 pounds. Capacity 20 to 30 pounds. Price \$22.



Platz Green Hand Duster

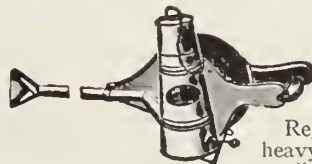
A fool-proof and practically indestructible Hand Duster—the wearing parts can be readily replaced. Has a large, powerful bellows and a capacity of 2 to 4 pounds; 30-inch extension with spreader. Will handle any dust that can be used in larger outfits. Price \$6, postpaid \$6.25.



Peerless Dust Gun

The Peerless Hand Dust Gun is well constructed of first-class material and is built for service. The Gun is adaptable for dusting trees, one-row dusting, two-row dusting, dusting underneath foliage, and also dusting in burrows.

The gun is balanced, the hopper containing the dust hangs on the back, while the fan hangs to the front. The suction pipe connects the two, while a strap thrown over the shoulder supports the weight. The 5-blade fan is made in one piece and fastened to a shaft mounted with ball bearings which are continually lubricated with grease. The gears are cut in steel and brass opposite metals working together, and were designed for power and service. They are assembled in a tight housing and run in grease. The gear ratio is 43 to 1. With ordinary turning, the fan shaft will develop a speed of 1,800 revolutions per minute. The quantity of dust entering the intake pipe can be readily changed to produce a light mist or a dense fog-like cloud. The capacity of the hopper is 9½ pounds of lime. Equipped with a rotating and oscillating agitator which keeps the contents of the hopper on the move. Price, complete \$22.50, postpaid \$22.85.

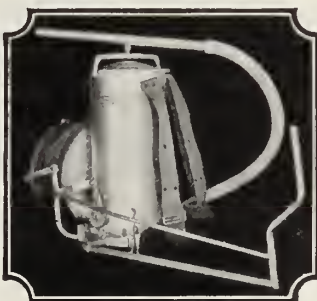


Platz Famos Hand Duster

Regulator is adjustable for a light or heavy application. Bellows of high-quality leather. Length of extension pipes, 24 inches. Compact and efficient. Capacity 1 pound. Price \$5, postpaid \$5.15.

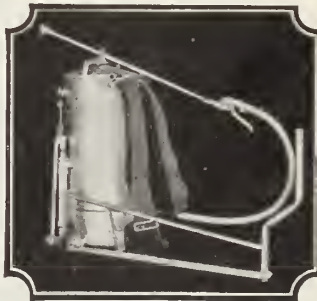
American Beauty Duster

The American Beauty is extensively used by the U. S. Department of Agriculture, many state universities, and the governments of many foreign countries. It is small in size and cost, but large in work accomplished. One man can dust trees up to 25 feet in height, and cover 3½ acres or more in a day and corresponding acreages in row crops. It is constructed of the finest materials and guaranteed to be satisfactory. Weight 16 pounds. Holds 15 pounds of dust. Price \$18, postpaid \$18.30.



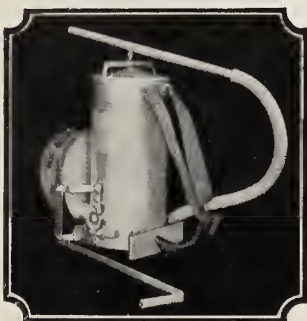
Super-Mist Sprayer

Without question, the greatest improvement in spraying equipment for many years. It is carried like a knapsack and is equipped with padded shoulder-straps and back-rest which insure comfort. All working parts are outside the tank, making them easily accessible for cleaning and adjustment. Entire top lifts off for easy filling. Has 30-inch flexible hose and 36-inch extension rod. Galvanized tank, capacity 4 gallons. Weight 17 pounds. Price \$16, postpaid \$16.35.



Blue Beauty Duster

Is the same size and shape as the American Beauty. The sifting device has been modified and is not quite so smooth and positive. The Blue Beauty is a very fine Duster for dry dusts, such as sulphur or lead arsenate. Equipped with 30-inch flexible rubber hose, two 20-inch lengths of tubing and spreader. Weight 14 pounds. Price \$15, postpaid \$15.25.



California Beauty Duster

The very Duster for truck crops. The bellows action is so rapid as to give an almost continuous flow of dust and still be under complete control at all times, doing away with waste. This feature makes it ideal for row crops, such as potatoes, peas, beans, cabbage, etc. There are no rapidly revolving parts to give trouble. Weight 11 pounds. Holds 12 pounds of dust. Price \$12, postpaid \$12.25.



Bartlett Searight Jointed-Pole Tree Trimmer

Has a compound lever head and is made with a hook and side lever. It is calculated for heavy work and will cut a limb up to $1\frac{1}{4}$ inches in diameter. Instead of running the rod connecting the knife lever along one side the pole to a handle lever, we have placed the handle lever on the opposite side, which allows the rod to cross the pole. As a result, one-half the strain is thrown on one side of the pole and one-half on the other, which gives about double strength. The jointed pole is an advantage in that it can be carried about in 4-foot lengths, also be conveniently put away after the pruning season is over.

8-foot, 2 sections.....	Postpaid	12-foot, 3 sections.....	Postpaid
	\$6 00 \$6 20		\$6 75 \$7 00
		16-foot, 4 sections.....	7 50 7 75

West's Lightning Tree Trimmer

The handle for operating the shear slides on the pole and leverage is obtained by a rope working through two iron pulleys, one single sheave pulley which is fastened to the pole and one double sheave pulley which is movable. The spring is 4 inches long, giving quick and positive action. The rod is $\frac{3}{8}$ inch steel, galvanized. This shear is light in weight, has a great leverage, and is quick in operation, for both hands can be used in guiding the shear, and when in place, the handle can be operated without changing position of the hands. Cutting capacity 1 inch.

8-foot.....	\$2 50	12-foot.....	\$3 00
10-foot.....	2 75	14-foot.....	3 25

Tiffany "Hammer-Forged" Pruners

These are strictly high-class Pruners in every detail. Forged from special steel they are carefully tempered to stand the strain and hold a keen edge. They are put together with a heavy rivet under tremendous pressure, which insures a good fit, having no nuts to work loose. Their steel levers are forged thin and light, yet are very stiff and strong, and the wooden hand-grips are

put on to stay. The jaws open very quickly without spreading the handles too far apart. Blade is thin and, having the draw-cut principle, cuts very smooth and easy, leaving no stub. Its high quality will prove it a good investment. Cuts $1\frac{1}{2}$ -inch limbs with ease. Length 25 inches. Either pattern, \$3.25, postpaid \$3.50.

Tiffany Grafting Tool

Forged from one piece of fine crucible steel. It makes clean splits and does not tear the bark or split the stub too far. Length 8 inches. \$1.25 postpaid.

Tiffany Improved Tree Scraper

A handy tool for removing loose bark that harbors insects. Made of thin forged spring steel. Length 12 inches. \$1.25 postpaid.

No more
handle trouble
Top, Tiffany's
Standard Pattern
Lower, Tiffany's
California Pattern

PRUNING SHEARS

Pexto, California Pattern. Solid forged Pruning Shear. Blade and handle is one piece of high-grade, forged steel. Volute spring. No. 502. 9-inch. Japanned handles. 75c. No. 505. Enamelled handles. \$1.

Pexto, California Pattern. Malleable iron head and handles. Polished tool-steel blade riveted to head. Volute spring. Regulating ratchet nut. No. 60. 9-inch. Black finish. \$1.45. No. R-65. Full polished. \$2.10.

Pexto, Swiss Pattern. Tool-steel blade, riveted on, ground convex. Double flat brass springs. Regulating ratchet nut. Furnished with extra blade. No. R-85. 8½-inch. Full polished. \$3.

Pexto, Ladies' Rose Shear. Made with clamping shield on the blade which holds the stem as the rose is cut. Full polished and nickel plated. No. 14-H. \$1.75.

Genuine French Shear. Forged tool-steel blade. Drop forged handles. Wheel-spring type which insures easy, positive action. 9-inch. \$2.75.

Boker's No. 550. Polished oval Riser pattern hand-forged high carbon blade and hook. Volute spring. Lock nut and bolt. 9-inch. \$1.

Disston's No. 152. Blade and handle and hook and handle are forged from one piece of steel. Blades are hardened and tempered. Hook shaped to prevent work from slipping. \$3.

Disston's No. 153. Known as the "bull-dog" type of Pruner. Has two cutting blades, both shaped to prevent work from slipping. A strong tool for the heavier pruning. \$2.65.

PRUNING SHEARS BY PARCEL POST 10 CTS. EACH EXTRA



No. 22 Disston's York State Pruner

Steel blade 20 inches long, 5 inches wide at butt, 1 inch at point; 7 points to the inch. Handle securely attached to blade with three brass screws. \$1.60, postpaid \$1.75.



No. D24 Disston's Pruning Saw

Suitable for general pruning as well as a utility Saw for the man around the house and on the farm. Steel blade 22 inches long; 1 1/4 inches wide at the point; 7 points to the inch. Metal handle and hardwood grip. \$2, postpaid \$2.15.



No. 32 Disston's Pruning Saw

Just the tool for foresters and orchardists. Steel blade 20 inches long, 5 inches wide at butt, 1 inch wide at point. Champion teeth. Hornless handle of beechwood. Dowel pin through grip gives unusual strength to the handle. \$2.25, postpaid \$2.40.



No. D27 Disston's Pruning Saw

Designed for the professional. Steel blade 26 inches long, 6 inches wide at butt, 1 1/4 inches wide at point; 6 points to the inch. Cuts on both draw and push stroke, either dry or green wood. \$3.75, postpaid \$3.90.



No. 15 Disston's Pruning Saw

Steel blade, 14 inches from center to center of hole, 1 inch wide, 8 points to the inch; adjustable; cuts on both draw and push stroke; swivel at both ends; wing-nut tightener. Large comfortable grip, beechwood handle fastened to frame with 2 nickel-plated iron screws. \$2.25, postpaid \$2.40.



No. 40 Disston's Duplex Pruning Saw

Steel blade with double straight-edge; top edge, 8 point cross-cut teeth and lower edge "lumberman" teeth. Blade secured to beech handle with three brass screws. 16-inch \$1.20, 18-inch \$1.30, 20-inch \$1.40, postage 15 cts. extra.



No. 17 Disston's Triangular Pruning Saw

Steel blade 20 inches from center to center of holes, 1/2 inch wide. Steel frame, oval back, straight, tapered point and polished beech handle with extra-large grip for use with gloved hand. \$2, postpaid \$2.15.



Disston's No. 166 Pruning Saw

A good, strong, practical tool with 14-inch crescent-shaped steel blade; 1 1/2 inches wide at handle; teeth on concave edge to cut on draw stroke; 8 points to the inch. \$1.10, postpaid \$1.20.

No. 168. Similar to No. 166 but better adapted for cutting green wood. \$1.25, postpaid \$1.40.



No. 55 Orchard Pruning Saw and Shear

A combination tool—saw and shear. The curved blade makes it easy to engage and to saw the higher branches of a tree when using a pole. The blade of the saw is 9 1/2 inches on cutting edge.

Shear frame and socket is made of malleable iron. Blade shaped to cut with a shearing motion. The hook will take a 3/4-inch or smaller limb. Shear blade is 4 inches long with 1 1/2-inch cutting edge. Spring returns knife to open position. Price, without pole, \$3, postpaid \$3.15.

No. 111 Pruning Saw. Same as No. 55 except without shear. \$2.15, postpaid \$2.30.



Disston's No. 9 Tree Pruner

Built principally for clipping underbrush and the heavier branches of small trees and shrubbery. The long, strong handles permit great leverage.

Blade and hook of Disston steel, hardened and tempered. Blade is accurately ground to a keen cutting edge.

Arm and blade, and arm and hook are each one piece of steel. Length of blade and hook 4 inches. Length of arms 24 inches. \$3, postpaid \$3.20.

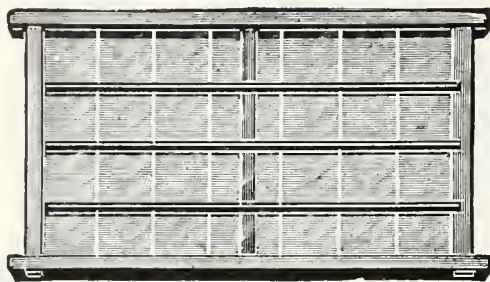
No. 7. Similar to No. 9, except blade and hook are 2 1/2 inches in length with deeper curve in hook which gives the blade a shearing cut. \$2.75, postpaid \$2.95.

Disston's No. 3 Tree Pruner



Known as the "bull-dog" type of shears. Both jaws are curved and beveled to cutting edge. Just the tool for heavy pruning. Blades of Disston steel, hardened and tempered to hold keen cutting edge. Hardwood handles 20 inches long are reinforced by heavy steel cup ferrule and long steel ferrule. Special Disston patented tension and adjusting device. \$3.15, postpaid \$3.30.

Metropolitan Hotbed Sash



Metropolitan Hotbed Sash are made from the very best grade of air-dried Gulf cypress, smoothly milled. All parts are mortised and tenoned on the very latest and specially built machines to insure accurate, smooth, and tight-fitting joints, which is very essential in Hotbed Sash. All the bars are beveled at the bottom, to admit the maximum amount of light. They are carefully assembled and clamped perfectly square and nailed with cement-coated nails and steel barbed dowel pins.

All Sash are made $\frac{1}{2}$ inch wider than finished size, and then run through a specially built machine which finishes the Sash the same width and planes the sides perfectly straight to prevent any open space between Sash when laid on the frame. After the above work is performed, each Sash is carefully examined for any possible defects in material or workmanship and all Sash passed O. K. are run twice through a three-drum sandpapering machine to make them perfectly smooth and all the same thickness.

PRICES

Four rows, single-layer putty Sash; for either 6 x 8 or 8 x 10 glass. Sash are 3 feet 2 inches wide by 7 feet long, $1\frac{3}{4}$ inches thick, made of best cypress, with round iron crossbar in center, and with horns. Unpainted, without glass, \$4.10 each. Five-Sash lots 15 cts. per sash and 10-Sash lots, 30 cts. per sash less than above price.

For 4 x 6 foot, add 30 cts. per sash to above prices.

Special prices on larger quantities.

We can furnish any other kind or size sash required.

Glass for Hotbed Sash

We carry in stock Lustra Glass, also Pennvernon Glass, both flat drawn and made by a new process.

	Per box
6 x 8, 150 lights, B, Single Strength	\$3 25
8 x 10, 90 lights, B, Single Strength	3 25
10 x 12, 60 lights, B, Single Strength	3 25
8 x 10, 60 lights, A, Single Strength	3 75
10 boxes and upward, 25 cts. per box less than above prices.	



Hotbed Thermometer

No. 5981. With brass point. \$3, postpaid \$3.10.

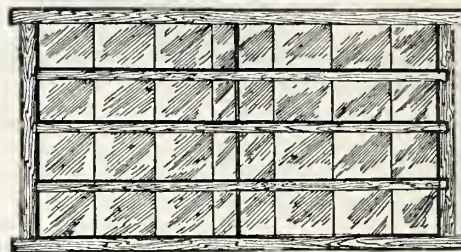
Neponset Flower Pots



Neponset flower pots are universally used by home growers of flowers and vegetables, by truck-gardeners, by florists, by every grower of plants on a small or large scale. They are light, durable, and inexpensive. When used for transplanting they can be handled quickly and the construction permits removing easily if desired. They are ideal for rooting or shipping vegetable and flowering plants of any description. They are made from a tough, lasting, and water-proof paper and will not break in shipment or handling.

	25	Postpaid	100	Postpaid	1,000
2 1/4-in.	\$0 30	\$0 40	\$0 75	\$0 90	\$5 50
3-in.	40	50	1 00	1 15	8 00
4-in.	50	60	1 65	1 85	13 00

Eureka Hotbed Sash



Eureka Sash are manufactured from Gulf cypress, every piece of which is guaranteed to be free of sap or defects of any kind.

They are made perfect and so accurately fitted that they will hold together in good shape for many years under ordinary usage.

All Sash are rabbeted for lapped glass and are of standard size, 3 feet 4 inches by 6 feet for four rows of glass 8 inches wide. Each Sash will hold 28 panes of 8 by 10-inch glass. The stiles, or outside bars, are $1\frac{3}{8}$ inches thick and about $2\frac{1}{2}$ inches wide. The three rabbeted bars are $1\frac{3}{8}$ inches thick. An oak crossbar runs through the rabbeted bars and half-way into the stiles. Furnished knocked down, unpainted and without glass. Price, \$3.10 each; per bundle of five, \$14. See left-hand column of this page for prices of glass.

Mastica

Mastica is elastic and tenacious. In a few hours after use, a skin or film is formed, preventing the evaporation of the oils and leaving it pliable for years. On account of this quality, it admits of the expansion and contraction which is continual in the wood-work of a greenhouse from moisture and heat. One gallon will cover about 290 running feet, one side.

	Postpaid
Qt. can (weight 5 pounds)	\$0 75 \$0 85
Gal. can (weight 15 pounds)	2 50 2 80

MASTICA GLAZING MACHINE. For applying Mastica. \$2.75, postpaid \$3.

Evergreen Duroglaze White Glazing Putty

An ever-elastic cement for glazing, reglazing, and repairing greenhouses of every description; guaranteed to hold fast to glass and bars and always remain plastic and not chip off. Costs less per gallon, and can be applied in less than half the usual time.

1-gal. can.	\$2 50	20-gal. keg.	\$44 00
5-gal. pail.	11 50	40-gal. drum.	86 00
10-gal. keg.	22 50	Glazing Gun.	5 00

Glazing Gun free with 40-gallon drums.

Duro Guttercoat

A weather-proof and waterproof coating for relining old, wornout gutters and for water proofing new ones. Applied with an ordinary brush, makes a coating ten times thicker than ordinary paint.

1-gal. can.	\$1 65	20-gal. keg.	\$27 00
5-gal. pail.	7 25	40-gal. drum.	52 00

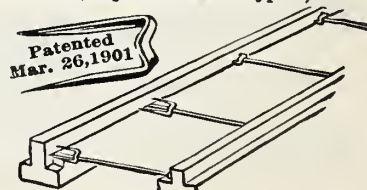
Duro Greenhouse White Paint

Made for both interior and exterior use. Makes a beautiful tile-like finish that can be washed repeatedly without being affected.

1-gal. can.	\$3 25	10-gal. keg.	\$29 00
5-gal. pail.	14 75		

Peerless Glazing Points

Used by all practical florists and market-gardeners for glazing hotbed sash. No. 1. For small, single-thick glass. No. 2. For large, single-thick glass. Both sizes, 75 cts. per 1,000, postpaid.

PEERLESS GLAZING POINT.
(Improved Van Reyper.)

Gator Hide Mulch Paper

The importance of mulching as a means of conserving moisture and controlling weeds has been recognized by successful gardeners for many years. And the use of Mulch Paper is one of the most effective methods yet devised for this purpose. The paper mulch effectively controls obnoxious weeds and grasses, has a tendency to create a higher and more even soil-temperature and conserves the soil-moisture by checking evaporation. Use Gator Hide Mulch Paper to secure larger yields and greater profits.



PRICES				
Type	Width in.	Length ft.	Sq. ft.	Per Roll
A (light weight)	18	900	1,350..	\$3 00
	36	900	2,700..	6 00
B (heavy weight)	18	450	675..	3 00
	36	450	1,350..	6 00

Garden Package: Type B, 45 lineal ft., 18-in. width, 65 cts., postpaid 75 cts.
Write for special prices on orders of 30 rolls or more



Circular and Sample on request



Germaco Hotkaps

Earlier,
More Profitable
Crops

Germaco Hotkaps can make many extra dollars for you this season. They are patented wax-paper cones—"individual hothouses for each plant" that completely cover them, and *fully protect* them from frost, wind, rain, ground-crusting, and insects. This is your assurance of earlier, bigger crops, and higher, early-to-market prices. Hotkaps are inexpensive and easy to use. One man "sets" over 3,000 per day.

		Postpaid	
100 Hotkaps.....	\$2 50	\$2 65	5,000 Hotkaps.....\$53 75
250 Hotkaps.....	4 00	4 15	10,000 Hotkaps.....105 00
1,000 Hotkaps.....	11 00	11 35	

Garden Setters, made of papier-mache, 50 cts. each.

Garden Setter and Tamper included at price quoted with 100 and 250 Hotkaps. Steel Setters, with Tamper, \$2.50 each.

Milo Waterproof Hotbed Mats

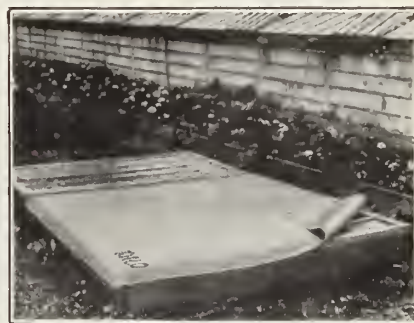
Made from heavy-weight burlap, absorbent pulp, and felt cemented together with a specially prepared waterproof compound. This combination forms a covering both airtight and waterproof.

Absolutely impervious to rain, sleet, and snow; proof against frost; repellent to rats and mice; easy to handle; wear for years; also make ideal truck covers for marketing vegetables.

PRICES

	Each	Doz.
40 x 78 in	\$1 90	\$18 00
78 x 80 in	3 75	36 00

40-in. width, in continuous length up to 50 feet, 24 cts. per ft.
78-in. width, in continuous length up to 50 feet, 48 cts. per ft.



One-Minute Washer

The One-Minute Model No. 5 represents a very efficient and simple hand-washer at a moderate price.

The tub is built from carefully selected kiln-dried Louisiana red cypress—the "wood eternal"—which has proved best adapted to Washing Machine construction. Legs are solid with tub and strongly braced, making tub strong and durable.

The compound lever trebles the power and is the secret of the Easy Running One-Minute Washer. This great leverage is compounded and so distributed when connected with the ball-bearing fly-wheel mounted close under the tub that with very little effort the fly-wheel gains sufficient momentum to carry the load. This wonderful Compound Lever is used only on the One-Minute Washer. It is a real labor-saving invention.

The driving mechanism is under tub out of the way—protects you from accidents—protects your clothes from dirt. Heavy die cast gear, securely attached to upright post, operates lightning speed fly-wheel under tub bottom. Strong and durable; will give years of service.

A large, one-piece dolly with four long pegs swirls the clothes through the soapy water without injury to the finest fabrics. This dolly is the floating type and adjusts itself to any quantity of clothes that may be put in the tub.

Price \$17.50

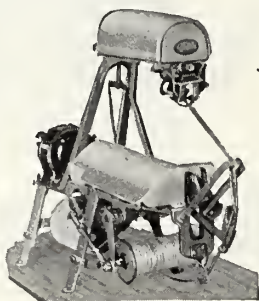


Felins Truck Farm Equipment

Bunch Vegetables, Cut-Flowers, Small Nursery Stock can be tied ten times faster with a Felins Bunch Tyer



Foot Power



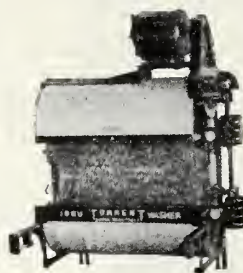
Electric

Quicker bunching means quicker sales and greater profits. These machines prove their value to the market-gardener, florist, and nurseryman from the start. Old methods of tying—systems which required hand-operation and consumed the growers' costliest possession, time—can now be dispensed with.

Foot Power \$75

Electric \$150

**Clean Vegetables the Felins Way for Better Pay
A Boon to the Truck-Gardener**



Torrent Bunch Vegetable Washer



Felins Root Washer

Wash 200 dozen bunches an hour with the Torrent. Two can work at the same time.

For bushel crop, Felins Root Washer is outstanding. Capacity is 5 bushels and 60 bushels an hour can easily be washed.

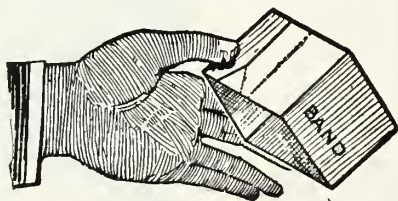
Both washers equipped with $\frac{1}{4}$ -H.P., 110V, 60C motors ready to be plugged into light-socket.

Torrent \$140

Root Washer \$150

Miller's No-Fold Dirt Bands

These Bands are used and recommended for transplanting purposes by experimental stations and large growers. They are time- and labor-savers. The plants need less watering, and when they are ready to set out, the Band can be



planted with plant, preventing the disturbance of the roots. In using Bands you have stronger and healthier plants at the minimum cost. Especially adapted for early vegetable plants.

SIZES AND PRICES	250	500	1,000
2 x 2 x 2 in.	\$0 50	\$0 90	\$1 50
3 x 3 x 3 in.	1 00	1 65	3 00
4 x 4 x 3 in.	1 25	2 15	4 00

Postage on 250, 15 cts.; on 500, 20 cts.; on 1,000, 25 cts.

Miller's Lock-Process Dirt Pots

Miller's Pots are made of high-grade water-finished board. Briefly, our Pots when locked stay locked; there is no occasion for the sides or bottoms of our Pots to become loose, and they contain no glue to loosen up or become sour.

SIZES AND PRICES	250	500	1,000
2 x 2 x 2 in.	\$0 85	\$1 40	\$2 50
3 x 3 x 3 in.	1 15	2 00	3 75
4 x 4 x 3 1/2 in.	1 50	2 65	5 00

Postage on 250, 30 cts.; on 500, 45 cts.; on 1,000, 75 cts.

McKim Patent All-Steel Measures

Guaranteed U. S. Government Standard Capacity



	Each	Postpaid
1 qt.	\$0 25	\$0 30
2 qts.	30	35
4 qts.	35	45
8 qts.	50	65
16 qts.	75	90

Per set (5 measures) \$2; postpaid \$2.25.

The Saxmayer Vegetable Tyer

The Saxmayer Vegetable Tyer is no longer an experiment, as is testified by hundreds of satisfied customers, but is an essential part of every successful market-gardener's equipment. It will save the labor of from three to six persons per day and will pay for itself in a very few weeks. The machine ties any kind of bunch vegetables except the large dozen-bunches of celery. It uses either cord or, by changing the knoter bill, a No. 13 tape. The Saxmayer does not require a skilled operator to manipulate it. Any man, woman, or child can run it. Little, if any, mechanical attention is required as there is no complicated mechanism to get out of adjustment.



- No. 1. Large Tyer for Foot Power . . . \$125 00
No. 1. Large Tyer with Electric Motor. 150 00
No. 2. Small Tyer 75 00

The Midget Saxmayer

Designed to meet the demand for a small, portable Tying Machine. It can be used in the field as well as in the washroom. Being small and light weight, it can be placed between the rows, permitting the buncher to tie as he pulls. Fully guaranteed. Price, \$45.

Prices on Cotton Twine and Braid will be quoted on request.

No. 1 Tyer

Tilley's Ladders

They are the most convenient orchard ladders ever produced for trimming trees and picking fruit. Made very light and strong. The best that can be produced.

Single Ladders

OPEN TOP

10-foot.....	\$3 25
12-foot.....	3 75
14-foot.....	4 25
16-foot.....	4 75
18-foot.....	5 75
20-foot.....	6 75
22-foot.....	8 25
24-foot.....	9 00
26-foot.....	11 00
28-foot.....	13 50

POINTED TOP

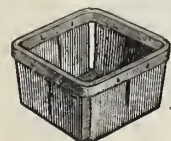
13-foot.....	4 00
15-foot.....	4 50
17-foot.....	5 25
19-foot.....	6 25
21-foot.....	6 75
25-foot.....	10 00
27-foot.....	12 00

Point included in above measurement.

Extension Ladders

OPEN TOP

24-foot, extends to 21 feet.....	\$9 00
26-foot, extends to 23 feet.....	9 75
28-foot, extends to 25 feet.....	10 50
30-foot, extends to 27 feet.....	11 25
32-foot, extends to 29 feet.....	12 00
34-foot, extends to 31 feet.....	13 00



FRUIT PACKAGES

We make a specialty of Fruit Packages, all kinds and sizes to suit the gardening and fruit-growing trade in western Pennsylvania, among which are the following:

Berry Baskets, Diamond Market Baskets, Grape Baskets, Stave Baskets, and Hand-made Baskets. When you are in the market for Baskets, please ask us for prices.



Pennsylvania Fruit-Picker

Price 50 cts., postpaid 60 cts.

More Pennsylvania Fruit-Pickers are used than all other makes combined because they are reliable and sell at a reasonable price. As a Fruit-Picker it has no superior. Made of heavy galvanized wire, and easily adjusted to a pole. It will gather apples, peaches, pears, and all similar fruits.

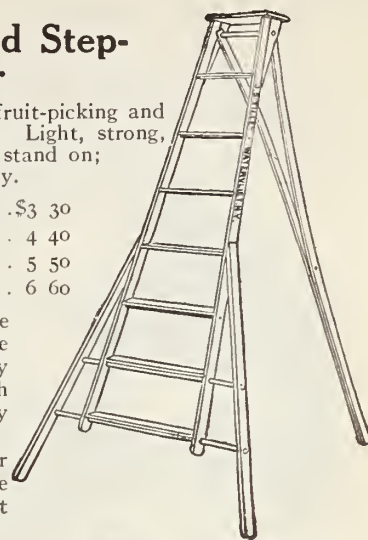
Omega Tripod Step-Ladder

Particularly adapted for fruit-picking and for use on uneven ground. Light, strong, rigid, broad-based. Easy to stand on; easy to move; folds up snugly.

6-step.....	\$3 30
8-step.....	4 40
10-step.....	5 50
12-step.....	6 60

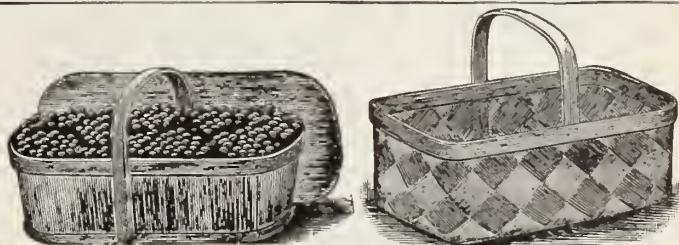
A first-class, well-made article. All flat steps. The two lower are supported by and rest on rounds which tie, support and thoroughly brace the main ladder.

Tilley Ladders are neither painted nor stained and the purchasers can see just what they are buying.



The Cyclone Planting and Picking-Bag

Convenient for planting potatoes or picking fruit. Is nicely made from heavy duck and has a heavy, adjustable web strap. The mouth of the bag is fitted with a steel frame which keeps it open. It hangs at a comfortable angle and leaves both hands free. 65 cts. each, postpaid 75 cts.



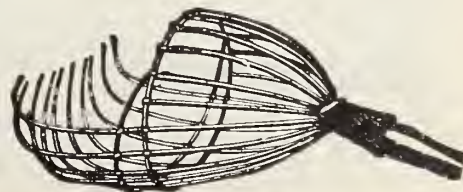
Owosso Folding Fruit and Vegetable Crate

Holds One Heaping Bushel

It is strong, durable, and unusually convenient to handle. All slats are made from Michigan hardwood beech, smoothly finished with rounded corners so as not to injure the contents.

These Crates are used extensively for handling apples, potatoes, onions, and tomatoes from the fields to the canning factories and warehouses; also for storage purposes. They stack up as high as desired and provide the right amount of ventilation. When empty will nest three together or can be folded flat.

Size of crate, 15½ inches wide, 17¾ inches long, 13½ inches deep. Size of slats, 5/8 inch by 1 inch. Average weight, about 9 pounds each. 65 cts. each, postpaid 80 cts.; \$5.50 for 10, \$25 for 50, \$48 per 100. We will deliver these Crates at your railroad station in lots of 50 or 100 at the above prices, direct from factory.

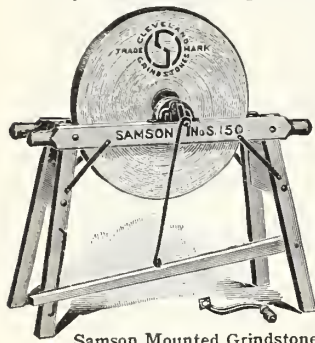


The Sterling Grindstone (Ball-Bearing)

A steel tubular frame, mounted Grindstone. Ball-bearing throughout. Absolutely the best mounted Grindstone on the market.

A double-treadle frame embracing the bicycle features of our bi-treadle. All rods and bolts are threaded; there are no cotter pins and no loose parts. Permanent rigidity is insured. Provided with a large comfortable seat and clothes protector.

Fitted on crank and shaft with improved ball-bearings—encased—consisting of a heavy steel ball casing and a cone or sleeve turned out of solid cold-rolled steel shafting, balls cannot work loose or drop out. Weight of stone 50 to 60 lbs. Price \$9.



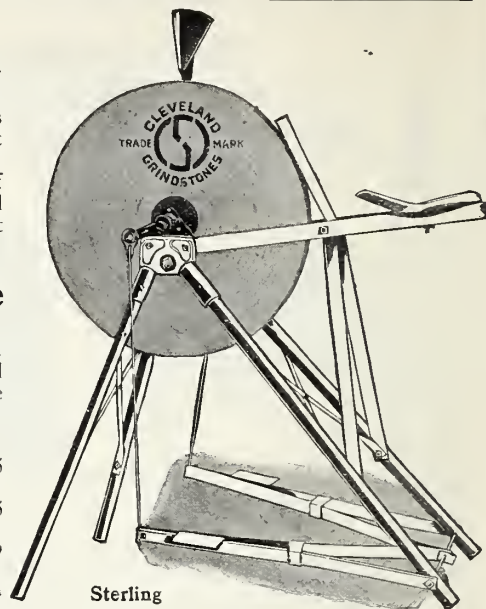
Samson Mounted Grindstone

Samson Mounted Grindstone

Specially Selected Stone

The frame is made of the best seasoned hardwood. The legs are securely framed into the sidebars and fastened by a bolt. The ends of the sidebars are neatly turned to serve as handles.

No. 150 Stone, weighs 100 to 110 lbs., usual thickness $1\frac{3}{4}$ to $2\frac{1}{4}$ inches.....\$9 25
No. 155 Stone, weighs 70 to 80 lbs., usual thickness $1\frac{3}{4}$ to $2\frac{1}{4}$ inches..... 8 25
No. 160 Stone, weighs 40 to 50 lbs., usual thickness $1\frac{3}{4}$ to $2\frac{1}{4}$ inches..... 7 50

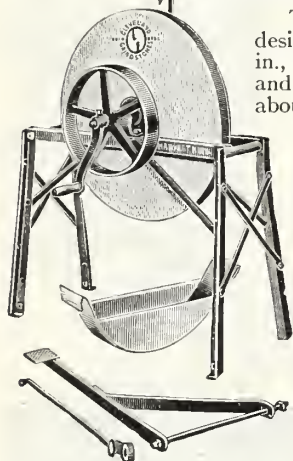


Sterling

Harvest King Power Grindstone

For Farm Use

The Harvest King Roller-bearing Power Grindstone is designed to meet the needs of the farmer who desires a Grindstone to be operated by a gasoline engine. The frame is of heavy angle-steel, $1\frac{1}{4} \times 1\frac{1}{4} \times \frac{1}{8}$ in., strongly braced. Equipped with high-grade, selected Cleveland Grindstone, 24 inches in diameter and 2 inches thick. Pulley 12 in. diameter $\times 2\frac{3}{8}$ inches. Heavy steel roller bearings. Weight, complete, about 140 pounds. Price, complete, with hand-crank, pulley, drip-cup, trough, and treadle attachment, \$13.50.

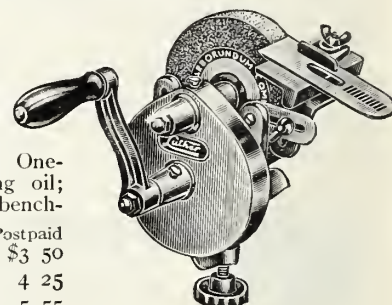


Harvest King Power Grindstone

Luther "Master" Tool-Grinders

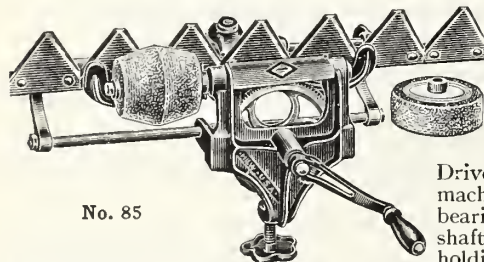
An easy-running and dependable Tool- and Knife-Grinder for everyday use in shops, homes, garages or wherever a portable tool-grinder is needed. Easy to carry and clamps on anywhere. Equipped with Carborundum Aloxit grinding wheels which insure greater cutting ability and longer wear. One-piece, dust-proof gear-case, flanged inwardly for retaining oil; adjustable tool-rest, chisel, and plain bit attachment. Steel bench-screw and malleable iron crank.

		Post paid
No. 114.	4 x 1 x $\frac{5}{16}$ -in. tool wheel.....	\$3 30 \$3 50
No. 115.	5 x 1 x $\frac{3}{8}$ -in. tool wheel.....	4 00 4 25
No. 116.	6 x 1 x $\frac{3}{8}$ -in. tool wheel.....	5 30 5 55
No. 117.	7 x 1 x $\frac{3}{8}$ -in. tool wheel.....	5 80 6 10



Luther Farm Grinder

Designed especially for the farmer who wants a good quality hand-power sickle and tool-grinder. Substantial construction;



No. 85

easy and simple to grind mower knives. Grinds six sections before reclamping. Holds any length sickle-bar. No. 85. With $4\frac{1}{2} \times 4\frac{1}{2}$ in. Medium Dimo-Grit Tool-Grinding Wheel \$8, postpaid \$8.30.

ball-bearing thrust eliminates friction and end-play in shaft. Clamps on mower wheel or bench. Drive-gear and pinion machine cut. Ball-bearings on wheel-shaft. Special sickle-holding attachment;

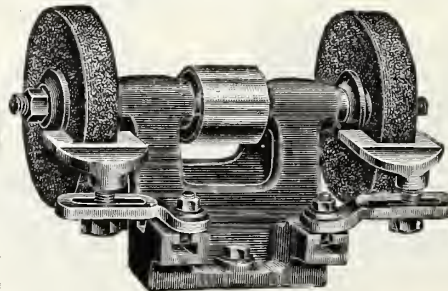
Carborundum File



Mighty handy for the farmer and gardener. Cuts quickly and freely, and gives better, cleaner edge than the steel file, and in less time. For sharpening mower sections and practically any edged farm and garden tool. No. 57. \$1, postpaid \$1.10.

Luther Power Grinder

A medium-duty, belt-driven bench-grinder suitable for grinding edge tools, axes, plane-bits, chisels, knives, etc. Frame made to



run belt from above, below, or the side. A $\frac{1}{4}$ h.p. motor will operate this Grinder satisfactorily. Equipment includes one medium and one coarse $6 \times 1\frac{1}{4} \times \frac{5}{8}$ in. Dimo-Grit Wheel, two adjustable Work-rests. No. 306. \$7, postpaid \$7.35.

Scythe Stones

Aloxite Brand Scythe Stones. These must not be classed with the ordinary sandstone Scythe Stones. No. 190. 10 in. long, 30c. No. 191. 12 in. long, 35c. No. 192. 10 in. long (heavy), 35c. English Scythe Stones. Talacre Pattern. 12-in., 35 cts. each. Baked Milan Scythe Stones. German Pattern. $9\frac{1}{2}$ -in., 10c. each, 6 for 50c. Scythe Stones by parcel post, 10c. each extra.

POST-HOLE DIGGERS

Standard Earth Augers

Standard Earth Augers are "standard" because they will do the most work in the shortest time with the least labor, and are made of the highest grade material. It is the only Auger made having movable blades which open to discharge contents. Will dump sticky clay with ease. Can be instantly adjusted to bore many different-sized holes. In fact, it has no equal for any kind of earth-boring. It bores seven different-sized holes—8, 9, 10, 11, 12, 13, and 14 inches in diameter and $3\frac{1}{2}$ feet deep. The stem can be fitted with pipe extension to bore extra-deep holes or wells. \$5 each, postpaid \$5.35.

Universal

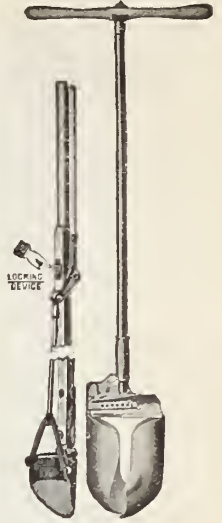
It has cast steel blade of best quality, strong, durable and easily operated. Works in all kinds of soil, clay, sand, gravel, shale, etc. \$2.05 each, postpaid \$3.

Lock Lever

The best implement ever put into the ground for the purpose of digging holes. It is easily operated. A boy can work with it. A trial will convince anyone that it will save its cost in a few days' use. The cast steel blade is fitted with automatic self-lock which locks the blade at right angles so that both hands may be used in lifting the ground out of the hole. Works equally well in any kind of soil from muck to stones. \$2.10 ea., postpaid \$2.40.



Open
Closed
Universal



Lock
Lever
Stand-
ard



Tamping Head Steel Digger

All-steel, long and wide cutting blade with large tamping head made of 1-inch round steel; length over all 5 feet, 9 inches. \$2.40 each.

Wood-Chopper's Wedge

No. 82. Round head; Truckee Pattern. 3-lb. 45 cts. each; 4-lb. 50 cts.; 5-lb. 60 cts.



Truckee Pattern



Wood Plow Doubletree Set

No. 652. Doubletree $3\frac{1}{4}$ x 38 inches with $\frac{3}{4}$ -inch steel loops, singletrees $2\frac{3}{4}$ x 30 inches with $\frac{1}{2}$ -inch steel loops. The above set made from second-growth hickory, painted red. Complete \$4.25.

Wood Wagon Doubletree

Doubletree $1\frac{3}{4}$ x $4\frac{1}{8}$ x 50 inches. Singletrees $2\frac{5}{8}$ x 34 inches. Painted red, varnished and striped. (Not illustrated.) No. 35A. Per set \$4.50.



Agricultural Set

No. 691. Complete hitch for land-rollers, hay rakes, tedders, mowing machines or any implement where flat doubletree is used. Painted red. Doubletree and singletrees \$1.75. No. 320 Neck yoke (not illustrated) extra if wanted, 85 cts..



Wagon Neck Yokes

Made from second-growth hickory; center ring 3-inch diameter.

No. 303. $2\frac{5}{8}$ -in. x 42 in. long, \$1.35.

No. 305. 3-in. x 48 in. long, \$2.



Wood Plow and Cultivator Singletree

Full-length loop pattern strap. Ring in center

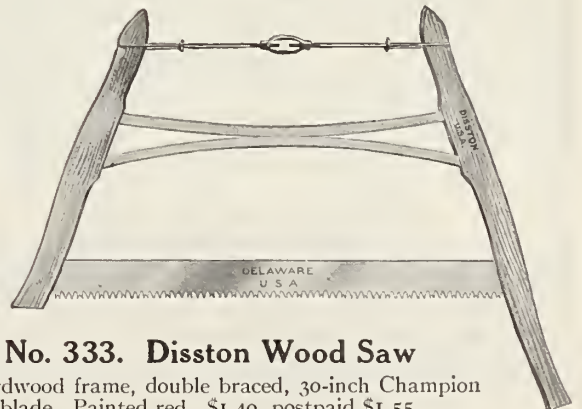
No. 1880. $2\frac{3}{8}$ x 26-inch.....\$0 90
No. 1881. $2\frac{3}{8}$ x 28-inch.....1 00
No. 1882. $2\frac{3}{8}$ x 30-inch.....1 10

Breast Yoke

MADE FROM
HICKORY

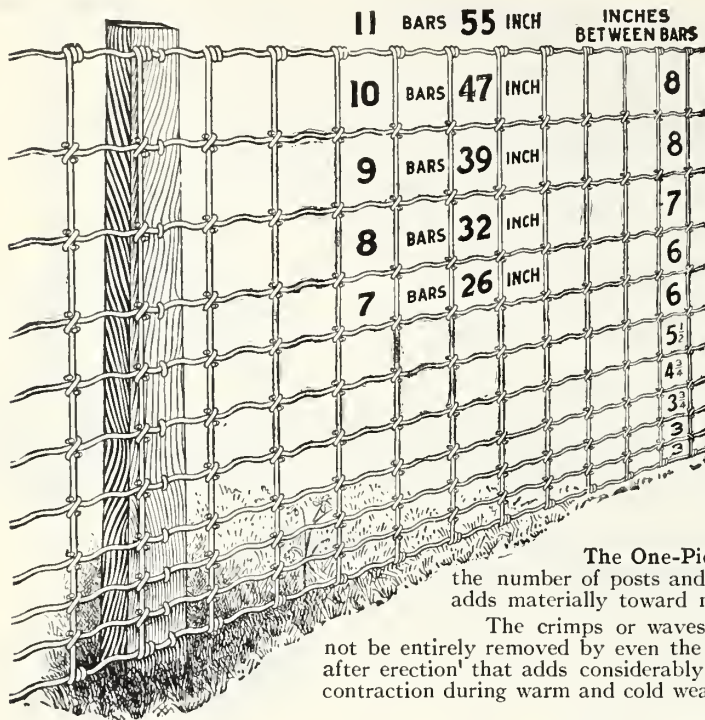


No. 631. $1\frac{3}{4}$ inches x 22 inches long, 85 cts.



No. 333. Disston Wood Saw

Hardwood frame, double braced, 30-inch Champion tooth blade. Painted red. \$1.40, postpaid \$1.55.



Square Deal Farm Fence

After forty years of fence-building, Keystone Steel & Wire Co. perfected "Galvannealed" Square Deal Fence. It is here at last—the farm fence that scientists say is best of all—the fence that state universities claim outstays all others; the fence that railroads choose because it is better; the fence that successful farmers everywhere are buying because it lasts two to three times longer and sells at no extra price.

The Square Deal Lock

Big bulky knots are no better from a construction standpoint, and many times worse than the trim, compact lock which positively prevents slipping. They merely increase weight and cost of production, without increasing the life of the fence in the least.

The manufacture of this lock requires the least possible amount of material. It absolutely cannot slip.

The crimp within the Square Deal Lock allows for considerable flexibility without any chance of slipping. This permits Square Deal Fence to fit the hills and hollows easily without bending the stay wires.

The One-Piece Stay Wire seems to be the logical style of stay to reduce the number of posts and thus lessen the cost and labor of setting. The stiff stay adds materially toward making fence-building easy.

The crimps or waves put into the line wires during the weaving process cannot be entirely removed by even the strongest stretchers. They give the fence an elastic tension after erection that adds considerably to the trim appearance and provides for the expansion and contraction during warm and cold weather.

PRICES PER ROD

No. 11. Top and bottom wire No. 9, intermediate and stay wires	Per rod
No. 11. Put up in 20-rod rolls	
No. 832. 32 in. high, 8 bars, 6-in. stays, weight 9.8 lbs....	\$0 45
No. 939. 39 in. high, 9 bars, 12-in. stays, weight 8.8 lbs....	38
No. 1047. 47 in. high, 10 bars, 12-in. stays, weight 9.9 lbs....	42
No. 1155. 55 in. high, 11 bars, 12-in. stays, weight 11.0 lbs....	47
In 10-rod rolls 25 cts. per roll extra	

No. 9. All wires including stays No. 9. Put up in 20-rod rolls	Per rod
No. 636. 36 in. high, 6 bars, 12-in. stays, weight 9.4 lbs., spaced 6, 6, 7, 8, and 9 inches between bars.....	\$0 37
No. 832. 32 in. high, 8 bars, 6-in. stays, weight 14.9 lbs....	63
No. 1047. 47 in. high, 10 bars, 12-in. stays, weight 14.6 lbs....	58
No. 1155. 55 in. high, 11 bars, 12-in. stays, weight 16.4 lbs....	65
In 10-rod rolls 25 cts. per roll extra	
Staples. 1 1/4-inch. 5 cts. per lb.	

We have listed above the most popular sizes and styles which we carry in stock at Pittsburgh. We will send on request a complete catalogue of Square Deal Fences, any of which can be shipped direct from factory.

Angle Steel Fence Posts

These have been designed for general farm use where a light-weight post is desired. They are easy to handle, easy to drive, strong and serviceable, and are rolled from specially selected steel. The Line Posts are 1 1/4 x 1 1/4 x 3/8 inches. One side of the angle is punched with holes 3/8 inch wide by 5/8 inch high, spaced 2-inch centers. Fence or barbed wire can be easily attached with ordinary fence staples. They are painted with a special steel paint that is baked on under high temperature. The Line Posts are equipped with patented slit-wing anchor plate. The slit wings, in the anchor plate, pack the soil against the sides and behind the post, affording still greater anchorage.

Line Posts

	Each	100 or more Each
5 ft. 6.2 lbs.....	\$0 28	\$0 25
6 ft. 7.3 lbs.....	33	30
6 1/2 ft. 7.8 lbs.....	35	32
7 ft. 8.4 lbs.....	37	34
7 1/2 ft. 9.0 lbs.....	39	36
8 ft. 9.5 lbs.....	41	38

End and Corner Posts

Made of 2 1/2 x 2 1/2 x 1/4-inch angle with rounded corners. Designed to be set in concrete. End Posts have one brace; Corner Posts, two braces.

	Each
End Posts. 7-foot; weight 52.5 lbs.....	\$2 65
7-foot, 8-inch; weight 57.0 lbs.....	2 85
Corner Posts. 7-foot; weight 84.0 lbs.....	4 25
7-foot, 8-inch; weight 89.0 lbs.....	4 50

Banner Steel Fence Posts

These Posts outlast three ordinary wood posts. No holes to dig—no setting—no tamping. Drive over 300 in a day.

Built like a railroad rail—the strongest form of fence post construction known.

With their large split-wing patented anchor plates will root firmly into the ground as driven and hold the fence securely in line.

A continuous series of lugs are rolled along both sides of the face of the post and spaced every 3/4 inch.

Ideal Posts are finished with a heavy coat of a special steel paint with unusual high preservative qualities that is baked on under a high temperature.

Fence wire is fastened with special hump clamps which are easily attached. The clamps come formed to fit snugly around the post. Just place them in position and bend arm back over stem of post. An ordinary pair of pliers or a hammer will do the trick. Seven clamps furnished free with each post. No staples to buy.

	Each	100 or more Each
5-ft. (weight 7.3 lbs.).....	\$0 35	\$0 31
6-ft. (weight 8.6 lbs.).....	41	37
6 1/2-ft. (weight 9.3 lbs.).....	44	40
7-ft. (weight 9.9 lbs.).....	46	42
7 1/2-ft. (weight 10.6 lbs.).....	49	45
8-ft. (weight 11.3 lbs.).....	52	48

SEE PAGE 133 FOR GALVANIZED POSTS



American Galvanized Steel Fence Posts

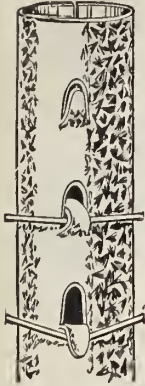
"The Post Without a Fault"

The American Galvanized Post surpasses all others in Strength—Durability—Economy.

The cylindrical shape gives greater resistance at the ground line and makes it easier to drive the post. The Line Posts are a straight cylinder 1 3/4 inches in diameter made of 1 1/2 gauge metal. Tongues are placed 1 1/2 inches apart and may be bent up or down to hold fence wire. Posts are galvanized after being formed and punched, all parts being protected by galvanizing. Line Posts, when driven, open automatically, providing self-anchorage.

Twenty-five years of actual service is convincing proof of the lasting quality of the American Post. Nothing adds more to the appearance of a farm than fence stretched on neat, uniform, and slightly steel posts.

For woven-wire fence, barb wire, and plain wire.



Galvanized Line Posts

	Each
6-foot; weight 8.4 lbs.....	\$0 65
6 1/2-foot; weight 9.1 lbs.....	69
7-foot; weight 9.8 lbs.....	74
7 1/2-foot; weight 10.5 lbs.....	79
8-foot; weight 11.2 lbs.....	87

End and Corner Posts

Made of No. 8 gauge steel galvanized after forming. Top and bottom diameter 2 1/2 inches. The end or gate post has one brace, the corner post has two braces. Shipped complete with all fittings. Designed to be set in concrete.

	Each
End or Gate Posts. 7-foot; weight 48.3 lbs.....	\$3 65
7 1/2-foot; weight 51.9 lbs.....	3 90
8-foot; weight 54.5 lbs.....	4 15
Corner Posts. 7-foot; weight 67.7 lbs.....	5 45
7 1/2-foot; weight 72.7 lbs.....	5 65
8-foot; weight 75.9 lbs.....	5 85

All End and Corner Posts shipped direct from factory.

Extras

	Each
Ornamental Tops. For Line Posts.....	\$0 20
For End and Corner Posts.....	40
Driving Caps. For Line Posts.....	40

Royal Blue Wire Stretcher

The Royal Blue Wire Stretcher and Hoist has no equal of its kind in simplicity, etc. It is a first-class roller-bearing Stretcher having large sheaves, each revolving on ten hardened steel bearings. Made entirely of best grade of steel and malleable iron. Reeved with best quality of 3/8-inch rope, 16 feet to each Stretcher. Wire grasps are positive and hold the wire firmly. The new swiveling features at top and bottom are a great convenience when using as a hoist or handling "twisty wire." Can be used as a hoist up to 1,000 pounds capacity. \$1.75, postpaid \$1.95.

National Single Wire Stretcher

Made of malleable iron. Grips firmly and easily hooks over any style of steel or wood post.

It is just what you want for stretching barbed and plain wire. \$1.25, postpaid \$1.40.



Special Barb Wire

Our Special Barb Wire is made of No. 14 galvanized, strong steel wire, and has a breaking strength of 1,000 pounds. The barbs are short and humane.

80-rod spool

Two-Point Cattle. Barbs about 5 inches apart.....\$2 10
Two-Point Hog. Barbs about 3 inches apart..... 2 20

Regular Barb Wire

Made from No. 12 galvanized wire. We can furnish in different styles as follows:

80-rod spool

Two-Point Cattle. Barbs about 5 inches apart.....\$2 70
Two-Point Hog. Barbs about 3 inches apart..... 2 90
Four-Point Cattle. Barbs about 5 inches apart..... 2 90
Four-Point Hog. Barbs about 3 inches apart..... 3 15

If preferred we can furnish above in even weight 100-pound spools at \$3.40 per 100 pounds.

Galvanized Plain Wire

100-lb. coil

No. 9. 1705 feet in 100-lb. coil. 10-lb. coil 60 cts.....\$3 60
No. 10. 2057 feet in 100-lb. coil..... 3 65
No. 11. 2582 feet in 100-lb. coil..... 3 70
No. 12. 3369 feet in 100-lb. coil. 10-lb. coil 60 cts..... 3 75

Galvanized Coil Spring Wire

No. 9. 1705 feet in 100-lb. coil. Price per 100 lbs. \$3.70.

Special prices will be quoted on any of the above Wire in ton or half-ton lots

Fence Staples

Galvanized. 1 or 1 1/4-inch. Lb. 5 cts., 100-lb. keg \$3.55.
Polished. 1 or 1 1/4-inch. Lb. 5 cts., 100-lb. keg \$3.30.

Wire Nails

100-lb. keg

20d Common Nails.....\$2 90
10d Common Nails..... 3 05
9d Common Nails..... 3 10
8d Common Nails..... 3 15

Prices on other sizes quoted on request. Prices subject to change without notice.

The Townsend Wire Stretcher

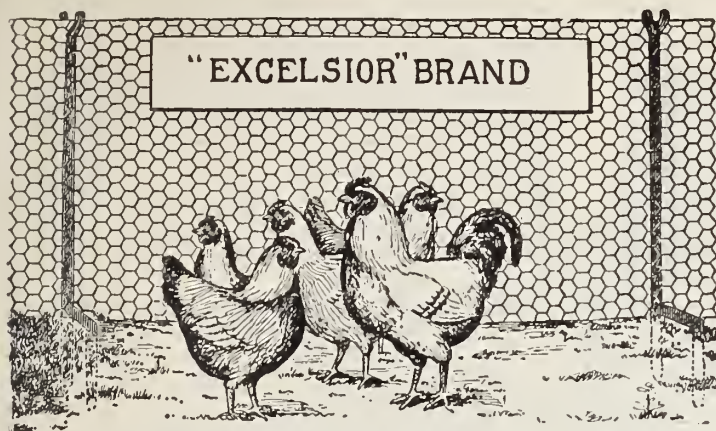


This is made with a wooden lever, or handle 3 feet in length, to which is attached malleable iron pinchers, into which are riveted serrated steel grips; warranted not to slip. It is a substantial and very durable implement. It stretches large-meshed woven wire much better than most of the Stretchers which are made especially for this purpose, and it works equally as well on plain, twisted, and barbed wire. For use on wood posts, \$1.75; for use on steel posts, \$1.90. Postage extra, 15 cts.

Little Giant Wire Stretcher

The Little Giant Wire Stretcher is the best crank stretcher made. It is constructed entirely of malleable iron. \$1.25, postpaid \$1.40.

Our aim has always been to furnish High Quality Seeds rather than to sell inferior seeds at low prices. The best is always the cheapest.



American Poultry-Yard Gates

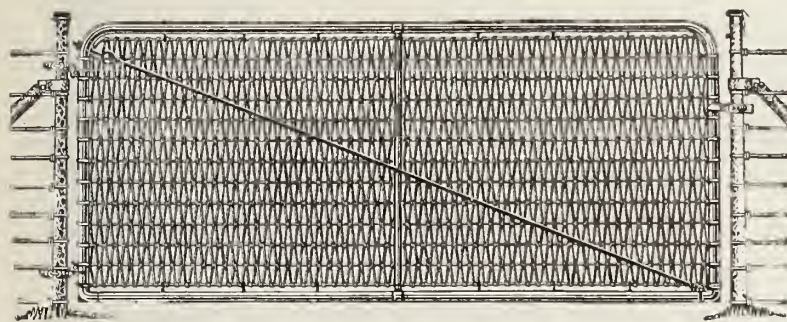
American Steel Gates, always efficient and well designed, have been improved both in structure, finish and operation. The tubular steel frames combine great strength, durability, and beauty. Gates and fittings are thoroughly galvanized.

American frames are covered or filled with a 2-inch mesh fabric of truss form, which not only proves a barrier to the smallest animals while lending bridge-like rigidity and strength, but also makes the gates unclimbable. The combination of the frame and the truss filling produces the highest type of fence gate, answering every requirement of good engineering practice.

PRICES

	Each
For 3-foot opening, 42 inches high; weight 19 lbs.....	\$3 00
For 3-foot opening, 50 inches high; weight 21 lbs.....	3 25
For 3-foot opening, 58 inches high; weight 23 lbs.....	3 50

Above prices include fixtures for wood posts. For fixtures for steel posts, add 50c.



Above prices include fixtures for wood posts. F.O.B. factory if not in stock. For fixtures for steel posts, add 75 cts.

"Can't Sag" Gates

"Can't Sag" Gate 52 inches high made of five 6-inch boards spaced as follows from bottom to top: 2¾, 4¾, 7¾, and 8¾ inches apart.

"Can't Sag" Gates are neither all wood nor all steel but a happy combination of the two. They retain all good features of wood Gates and the advantages of steel Gates, but have none of the drawbacks of either. They last longer than any other Gate you can build or buy. They weigh only half as much as ordinary all-wood Gates and are far stronger than any steel, wire, or gas pipe Gate made. They "Can't Sag" even a quarter of an inch. Made of "C" finish, long-leaf pine and painted a rich orange color.

If a board breaks it doesn't let the Gate sag or fall down, you simply slip out the broken board and replace it with a new one and in five minutes you have another perfect "Can't Sag" Gate as good as new and repaired at the cost of one board and a few minutes' spare time. "Can't Sag" Gates are the neatest, trimmest looking Gates ever put up. 12 feet long, 52 inches high, \$9; 10 ft. \$8.75.

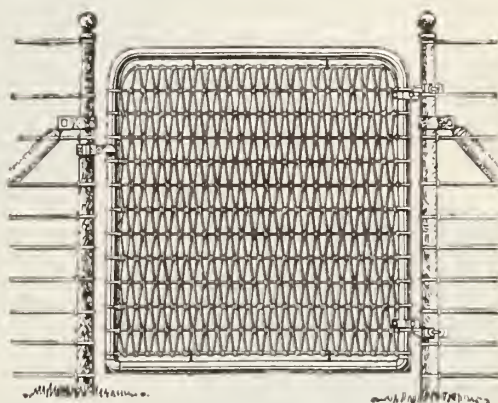
"Can't Sag" Gate Steels

For the farmer who prefers to furnish his own lumber and make his own Gate we furnish all irons necessary to build the Gate as shown above—everything except the boards. This includes 4 pairs of Angle Steel Uprights, Double Truss Braces, Hook Lag Screws, Hinges, Bolts, Washers, Lightning Socket Wrench, directions, etc. Price of set complete, \$3.75.

Diamond Mesh Poultry Netting

Made from No. 20 gauge wire and galvanized after weaving. Put up in 50- and 150-foot rolls

Height	2-inch mesh		1-inch mesh	
	50 ft.	150 ft.	50 ft.	150 ft.
1 foot.....	\$0 55	\$1 10	\$1 10	\$2 50
1½ feet.....		1 60		3 65
2 feet.....	95	2 10	1 85	4 60
2½ feet.....		2 35		5 50
3 feet.....	1 20	2 75	2 55	6 25
4 feet.....	1 50	3 65	3 25	8 30
5 feet.....	1 85	4 60		
6 feet.....	2 15	5 45		



American Single Drive Gates

With galvanized tubular steel frame, filled with a 2-in. diamond mesh galvanized fabric which is unclimbable

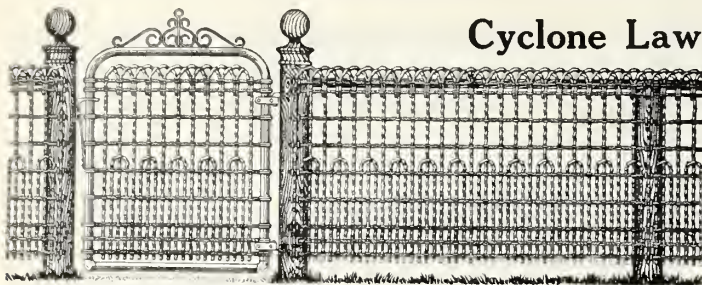
A strong, non-climbable, and economical farm Gate. Universally recognized for its simplicity and durability. In addition to upright tubular brace the frame is supported by a diagonal brace rod which keeps it firm and prevents sagging.

PRICES

	Each
For 10-ft. opening, 42 in. high; weight 56 lbs. ...	\$7 75
For 10-ft. opening, 50 in. high; weight 61 lbs. ...	8 00
For 10-ft. opening, 58 in. high; weight 67 lbs. ...	8 50
For 12-ft. opening, 42 in. high; weight 65 lbs. ...	8 50
For 12-ft. opening, 50 in. high; weight 71 lbs. ...	8 75
For 12-ft. opening, 58 in. high; weight 77 lbs. ...	9 25

Above prices include fixtures for wood posts. F.O.B. factory if not in stock. For fixtures for steel posts, add 75 cts.





Cyclone Lawn Fence

Makes beautiful home surroundings worth while

With Cyclone Fence enclosing your premises, you are assured success in your efforts to cultivate beautiful surroundings for your home. Flowers, lawns, gardens, trees and shrubs have protection at all times against destructive outsiders.

Cyclone Fence is woven in beautiful, symmetrical designs that are attractive and artistic, yet unobtrusive. From a variety of handsome patterns, in standard heights, fencing may be selected to harmonize with the character of property to be enclosed.

STYLE "F" is our most popular ornamental fence for front yards, back yards or division fence. Pickets are of No. 9 heavily galvanized wire spaced 3 inches apart at top, 1 3/8 inches apart at bottom. Cables spaced 6 inches apart, except the two top cables, which are spaced 2 3/8 inches apart. Above illustration shows Style "F" Fencing and Cyclone Galvanized Walk Gate.

STYLE "L-EXTRA" is a high-grade, moderately priced fence. Specially adapted for back yards and division fencing. Pickets of No. 9 heavily galvanized wire are spaced 3 inches apart. Cables are of heavily galvanized wire spaced 6 inches apart, except the two top cables, which are spaced 2 3/8 inches apart.

PRICES PER 150-FOOT ROLL

Style "F," 36 in. high; per roll.....	\$14 10
Style "F," 42 in. high; per roll.....	15 75
Style "F," 48 in. high; per roll.....	17 40
Style "L-Extra," 36 in. high; per roll.....	9 90
Style "L-Extra," 42 in. high; per roll.....	11 55
Style "L-Extra," 48 in. high; per roll.....	13 20

PRICES IN CUT LENGTHS

Style "F" 42 in. will be furnished in any desired length under 165 feet at 13 cts. per lineal foot. Style "L-Extra" 42 in. at 10 cts. per lineal foot.

Ask for special booklet.

Cyclone "L-Extra" Trellis

A very durable and artistic support for climbing vines and flowers; harmonizes with home surroundings. Retains its shape perfectly; is easily and quickly placed in position and will last indefinitely. It is made of corrugated No. 11 galvanized wire, spaced 4 inches apart; cables are of No. 13 galvanized wire.

PRICES

	150-foot rolls per roll	Cut lengths per lineal foot
18-inch width.....	\$11 00	\$0 09
24-inch width.....	12 50	10
30-inch width.....	14 00	11

Cyclone "45" Chain-Link Fencing

Cyclone Chain-Link Fencing makes a very strong and attractive installation. It can be installed on ordinary wood posts with a 2 x 4-inch top-rail or the steel posts shown on pages 132 and 133. It is made of No. 12 gauge all copper-steel wire, galvanized after weaving and will resist weather conditions longer than ordinary fencing materials. Furnished in one style only, 45 inches high and 1 1/2-inch mesh. Can furnish any length desired. Price 25 cts. per lineal foot.

Cyclone Galvanized Walk Gates

A handsome and practical Gate for all home purposes. The frame is heavy tubular steel, 1 1/8-inch diameter, and galvanized. The fabric is built into the frame by stretcher-bar method—no holes drilled in the frame. The ornamental scroll top adds a pleasing artistic touch to Gate. These Gates are made for 3-foot openings, which means distance between posts with proper allowance for hinges and latch.

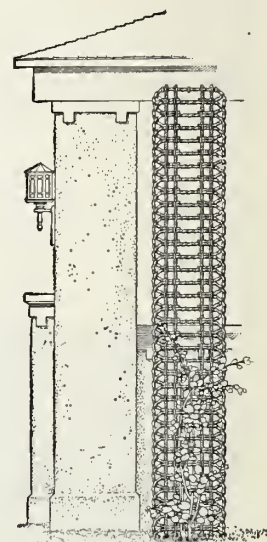
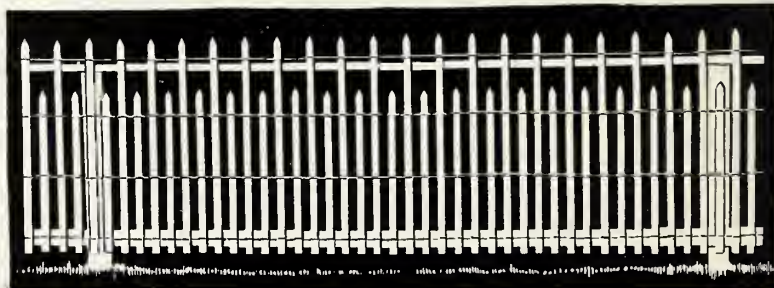
PRICES

Gate covered with Style "F" Fabric, 36 in. high, \$2.40; 42 in. high, \$2.70; 48 in. high, \$2.85. Gate covered with "45" Fabric, 48 in. high, \$4.50. Prices include fixtures for wood posts. Fixtures for tubular steel posts, \$1 extra. If steel-post fixtures are wanted, give outside diameter of posts.

Staggered-Top Lawn and Garden Picket Fencing

PROTECTION : BEAUTY : ECONOMY

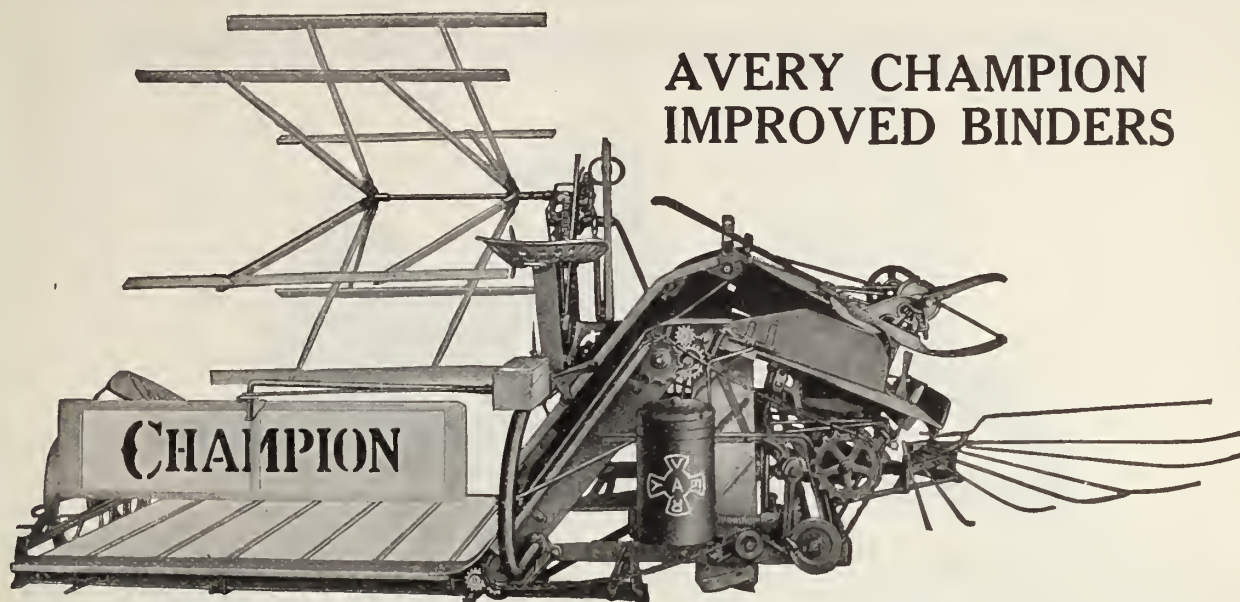
The staggered tops, the Gothic pointed pickets, and rich snow-white finish of this Fence combine to give unusual charm and beauty. For yard or garden, it stands out in rich contrast with its green setting. No ornamental Fence of steel or wire could be more attractive. Its closely spaced pickets, tightly woven, shut out effectively even small intruders. With this Fence around your garden or yard, you have the best protection from intruders passing through, over or under. The longer pickets are 4 feet in length, and the intermediate pickets are 3 feet long, woven together with four cables of heavily galvanized wire. Pickets are 1/2 x 1 1/2 inches, and spaced 2 inches apart. Price, 50-foot roll, \$7.75.



"L-Extra" Trellis

Cyclone "45" Fencing

AVERY CHAMPION IMPROVED BINDERS



Three-Quarter Rear View of Binder. Supplied in 6, 7, and 8-foot cuts

Avery's Champion Binder by any other name would still be the Champion Binder, for it has to its credit an unmatched record for durability, for easy pulling, and for getting the grain. Its championship has been challenged time after time, but this sturdy, engineered Binder, with its many special features, is still, after many generations, the Champion Binder—in name, in reputation, and in fact.

Relief Rake. Short, tangled, or lodged grain, or grain that is full of weeds and grass, has a tendency to get twisted around and start up the elevator head first, or to clog between the platform and the elevator, unless it is rapidly cleared away. The kicking motion of the Relief Rake straightens out the tangled grain so it reaches the elevator in proper condition. It keeps trash cleared away from the inner end of the platform and prevents trash and grain from accumulating on the inner end of the cutter bar and dragging through uncut grain. This insures cutting a clean swath the full width of the cutter bar.

Force Feed Elevators. The illustration shows a cross-section view of the Force-Feed Elevator in operation. Note that the upper elevator canvas runs over three rollers so arranged that the lower surface adjusts automatically to light or heavy grain. This arrangement insures a positive feeding of grain to the packers and also permits of running the canvas comparatively slack which greatly increases its length of service. Another big improvement in Binder construction is the roller between the upper end of the lower elevator and the binder deck. It insures a force feed of grain down into the binding attachment, which prevents loss from grain backing up against the end of the elevator and being carried down between the end of the elevator and the deck.

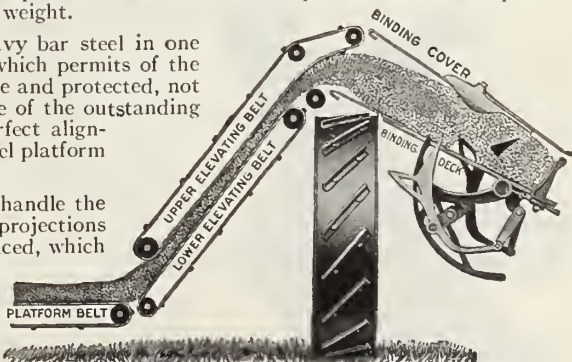
The Force-Feed Elevator is one of the exclusive Champion features. It combines all of the advantages and none of the disadvantages of both the floating and rigid types of elevators.

See cross-section view below showing how grain is fed to the packers.

Balancing Sectors. The Sectors which form the brackets of the main wheel are inclined forward at the top and curved to the rear at the bottom. This inclination of the Sectors moves the machine forward and back over the axle as it is raised and lowered. This keeps the machine perfectly counterbalanced at every height, whether it be tilted forward for cutting short, tangled or badly lodged grain, or raised for cutting tall grain. This perfect balance of the Champion insures easier operation of mechanical parts, less draft, and also relieves the team of neck weight.

Main Frame. The Main Frame is substantially made of heavy bar steel in one piece and is securely braced. It has two strong cross members which permits of the large bevel gear and knife crank-shaft being securely held in place and protected, not outside the frame as in other makes. Its remarkable rigidity is one of the outstanding features of the Champion, as it holds the working parts in perfect alignment under the severest strains incident to uneven ground. The steel platform is securely bolted to this frame.

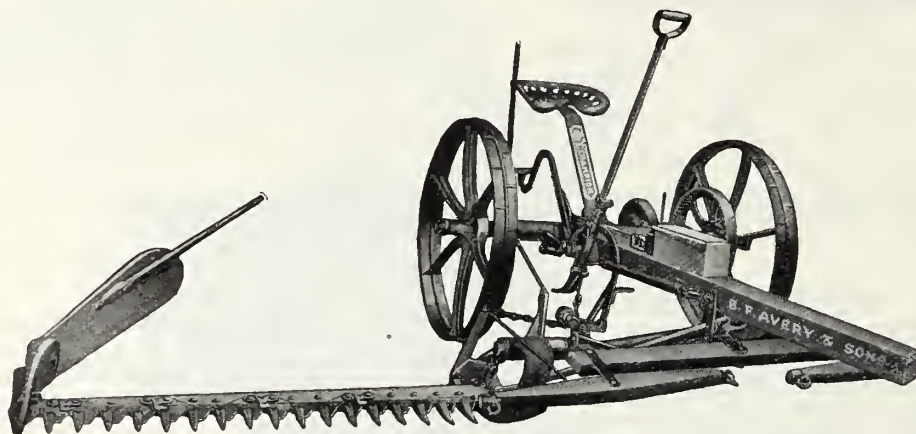
Platform and Cutter Bar. The platform is wide enough to handle the tallest grain. The bottom is of the smooth sheet steel with no projections to catch trash. The platform is made of bar steel and strongly braced, which eliminates the danger of the platform twisting out of shape or of the canvas rollers getting out of alignment. The cutter bar is a "Z" angle and effectively braced. It cannot twist, sag or spring out of line, which insures an easy, smooth-running knife. The guards have steel wearing plates and are exceptionally long lived; they can be easily removed and replaced.



Force Feed Elevator

SPECIAL CATALOGUE AND PRICES WILL BE SENT ON REQUEST

AVERY CHAMPION IMPROVED MOWERS



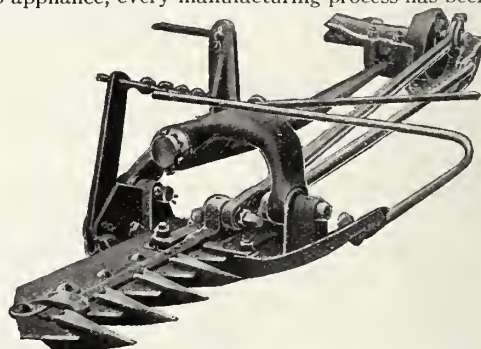
Avery Champion Standards. For many years the name Champion has stood for fine hay tools. For nearly a century the name Avery has stood for the highest type of shop and designing practice in the production of Avery farm machinery. Since the acquisition of Champion goods by Avery, every working part, every shop appliance, every manufacturing process has been made to conform, without compromise, to the standards which Avery has maintained since 1825. The Avery Champion Mower, with its outstanding features, is a notable example of the results which could naturally be expected from such a combination. It is the standard toward which all mowing-machines aim, but which Avery Champion alone attains.

The Avery Champion Mower possesses many features of superiority. The draft-link is parallel to the pole; the malleable fly-wheel is removable and replaceable. The cutter bar is reinforced over its entire length. There is no part of an Avery Champion Mower that does not bespeak unusual excellence of design and manufacture.

One-Piece Steel Pitman. The One-Piece Steel Pitman on the Avery Champion Mower eliminates the greatest trouble to which mowing-machines have always been subject. There are no connections to come apart. There are no rivets to work loose. Shocks which would break a wood Pitman will simply bend an Avery Champion Pitman with no damage done that cannot be corrected on the spot. The section of the shaft, the special analysis of the steel, and the careful and scientific heat treatment all make for reliability, sturdiness, and permanence.

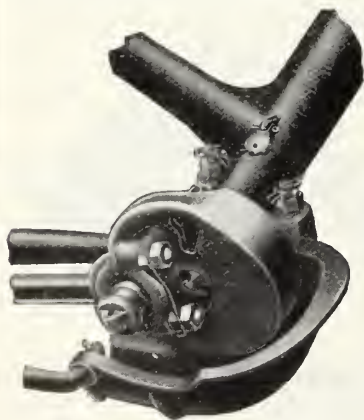
Every farmer knows that the elimination of the Pitman trouble does away with the bulk of the difficulties that are to be experienced with mowing-machines. The Avery Champion One-Piece Steel Pitman eliminates Pitman trouble of all kinds and simplifies in many ways the more serious problems of the hay farmer.

Drop Forged Knife Head. The extra-long Drop Heat-treated Steel Knife Head is hard and wear-resisting at the points where it is subject to extreme friction and tough and strong where it is subject to breaking strains. It is long-wearing and practically unbreakable, a saver of time, trouble, and money.



Sectional view showing the self-adjusting pitman and knife head connection and the wide, substantial coupling yoke which holds the cutter bar in perfect alignment.

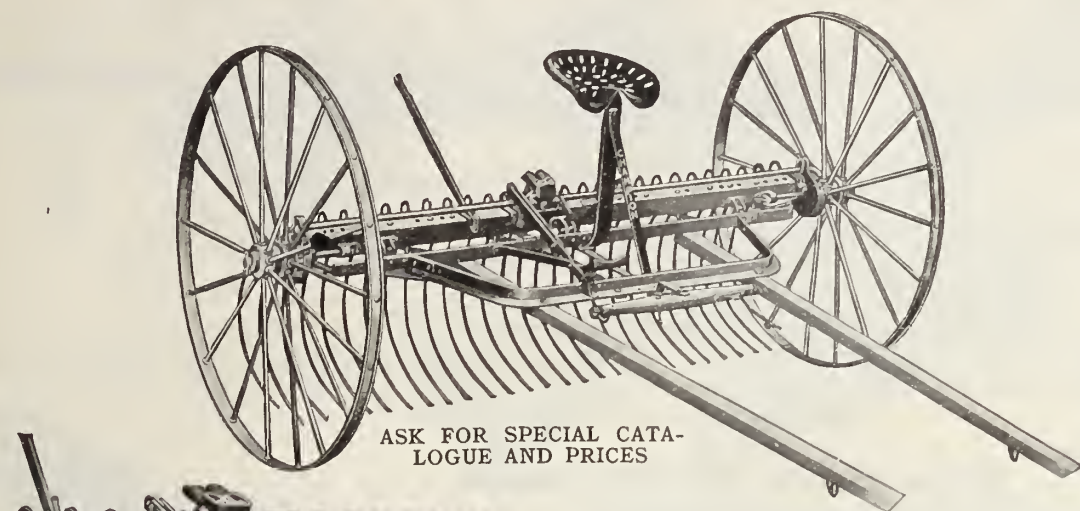
Closed End Bearing. The Closed End Bearing at the fly-wheel of the Pitman is an important feature of Avery Champion superiority for two reasons. First, due to the fact that it is confined at the inner end instead of the outer end, the normal tendency to bind is almost entirely eliminated. Second, due to the closed end of thimble construction and to the natural slanting position of the crank-pin, the tendency to lose oil is done away with. The net result, therefore, is perfect alignment at all times and a bearing which works without binding and does not overheat.



Description	Weight
4½-ft. Regular Lift.....	726 lbs.
5-ft. Regular Lift.....	731 lbs.
4½-ft. Vertical Lift.....	735 lbs.
5-ft. Vertical Lift.....	740 lbs.
4½-ft. Big Frame, Regular Lift.....	793 lbs.
5-ft. Big Frame Regular Lift.....	798 lbs.
6-ft. Big Frame Regular Lift.....	815 lbs.
7-ft. Big Frame Regular Lift.....	825 lbs.
3½-ft. One-Horse Vertical Lift.....	540 lbs.

ASK FOR SPECIAL CATALOGUE AND PRICES

AVERY CHAMPION IMPROVED SELF-DUMP RAKES



ASK FOR SPECIAL CATALOGUE AND PRICES

Notable improvements in both the structural and mechanical features of the Champion Self-Dump Rake have placed it far in advance of similar implements for durability, ease of action, and effective operation in the field. The frame is made of steel angles, braced and trussed in a bridge-like construction that will not twist under severest working conditions.

Large substantial wheels with staggered spokes provide ample traction and strength to insure smooth operation in the heaviest grasses. The stub axles are reversible, giving double the normal amount of service at the wheel boxes.

The new dumping device on the Champion Self-Dump Rake is simplicity itself. It is small and compact, with the fewest possible working parts, and absolutely positive in action. Short, powerful coil-springs, acting directly upon the ends of the dumping-rods, afford instant engagement of the pawls in the wheel ratchets and insure positive and continued connection at these points until the dumping action is completed and the trip automatically released. The new device has no complicated mechanism to get out of order and delay work. The cleaner teeth are of flat machinery steel, attached to the cleaner angle with machine and hook bolts. They are held in position by a bolted steel angle just behind the rake-head, no part of this construction to break or work loose.

This illustration shows the teeth lowered in raking position with the seat standards removed in order to show the trussed bridge-like construction of the angle-steel frame and the simplicity of the dumping device. This view also shows to good advantage the effective arrangement of leverage in the locking device, a slight pressure of the foot on the pedal serving to hold the teeth in raking position against all ordinary working pressure in the heaviest grasses.

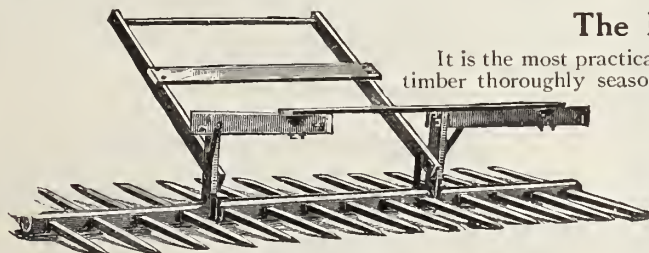
until the trip lever or the dumping device is released by the operator. The locking lever does not extend below the frame to catch in the hay and interfere with the clearance of the teeth in dumping. This relieves the operator of holding the teeth down when working in unusually heavy hay. No matter how heavy the load, the Rake will not dump until the trip lever is released.

The change from one to two-horse operation can be quickly made by bolting the thills together.

Teeth. Teeth are $\frac{3}{8}$ -inch single-coil and made of oil-tempered spring steel and attached to the rake-head by malleable lips. Furnished in 8-, 9- and 10-foot sizes.

The Huber Revolving Hay-Rake

It is the most practical Rake in use, and is made of the best selected hardwood timber thoroughly seasoned. The teeth are square and are framed in the heads perfectly solid, thus giving them more strength and making them less liable to come loose and break, and enabling them to gather the hay better than a round-tooth Rake. Leaves the hay in better shape for pitching and building than any other style of Rake. 8-ft., 14 teeth, \$15; 9-ft., 16 teeth, \$16.



Bale Ties

We make a specialty of furnishing Steel Wire Hay Bale Ties for baling hay, straw, waste paper, etc., to suit all the different sizes and styles of balers. We carry in stock at Pittsburgh for quick shipment the leading sizes of cross-head and single-loop ties and can also make prompt shipments direct from factory. Prices will be quoted on request.



Cross-Head



Single-Loop

Champion Side Delivery Rake and Tedder

Where hay is of heavy growth or likely to be rained on after cutting, the Champion Combined Side Delivery Rake and Tedder will be found indispensable in not only preventing loss to the crop but actually increasing its value.

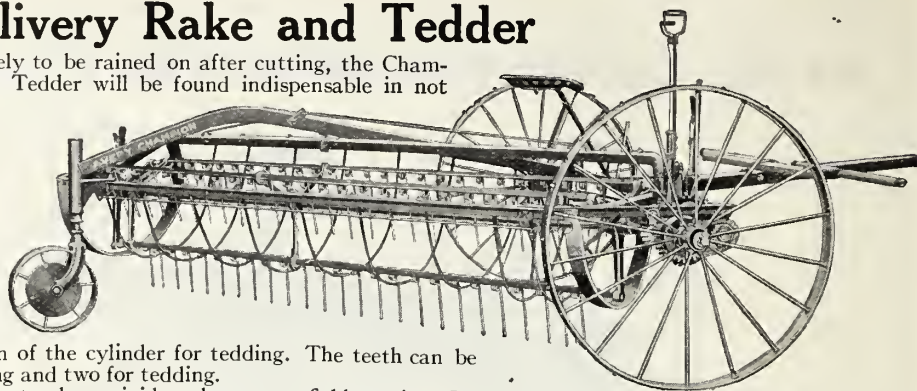
Two Machines in One

When used as a rake, the cylinder revolves in the direction in which the rake travels, delivering the hay in light, fluffy windrows on the left-hand side, which permits of following the mower closely as the hay is deposited on the raked stubble.

Shifting the lever reverses the direction of the cylinder for tedding. The teeth can be adjusted to three different angles for raking and two for tedding.

The angle-steel main frame is built to stand up rigid under severe field service. Its 40-inch main wheels are lugged to prevent slipping and ratcheted to prevent dragging when turning. The caster wheel adjusts to suit varying field conditions. Reel can be raised or lowered at both ends. Large tubular shaft operates in bearings with removable bushings. Rake-heads are secured by heavy pins. Rake-teeth are made of oil-tempered steel, 12 inches long with triple coils. Ample strength to handle the heaviest hay and sufficient flexibility to yield to obstructions.

PRICE AND SPECIAL CIRCULAR ON REQUEST



Moline Raker Bar Hay Loader

The Moline Hay Loader will handle the lightest swath or heavy windrow. Its large capacity enables it to take care of the heavy crop as well as the medium or light one.

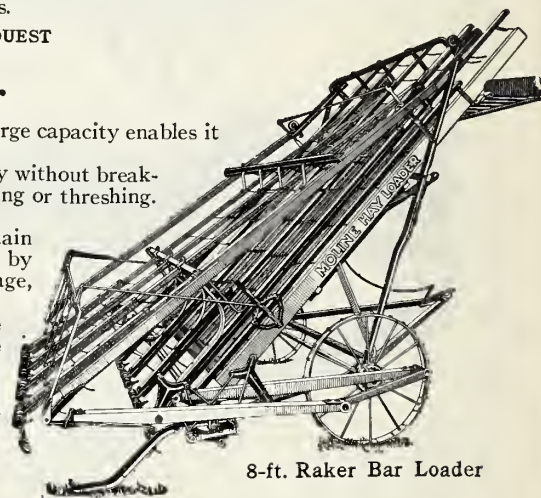
The rakes sweep the ground in long, steady easy strokes and gather up the hay without breaking the stems or shattering the leaves. The hay is always handled without beating or threshing. The Moline Hay Loader saves the foliage.

The rake-bars are driven by means of pitmans and cranks directly from the main axle. The motion produced is slow, very steady, and uniform to a degree unequaled by any other mechanism on the market. Short, choppy strokes, so destructive of foliage, are entirely eliminated by this construction.

This simple driving device eliminates the use of gears, sprockets, chains, or rope webs, thus avoiding all the trouble and delay from breakage which such parts are bound to cause, and the loader will give longer and better service.

The Moline Loader is of all steel construction, which increases its strength and durability yet saves in weight, and makes the machine more easy to handle. Materials and workmanship are of the best. Furnished in 6- and 8-foot sizes and with rear wheels in place of shoe-runners as shown in illustration.

Ask for special circular and price



8-ft. Raker Bar Loader

Moline Cylinder Hay Loader

Embodied in the Moline Cylinder Hay Loader are all of the improvements in Loader design. For example, one of the most common complaints on cylinder Loaders has been the spreading of the wheels. This weakness has been corrected by using a large pipe axle and long wheel boxings—the strongest type of construction, without excessive weight. It is also durable, built to give years of hard service. Steel parts replace castings; pulleys and wheels have replaceable boxings; the frame is of all-steel construction. These are the features that give long life—and service.

Furnished in 6-foot size and with fore-carriage as shown in illustration.

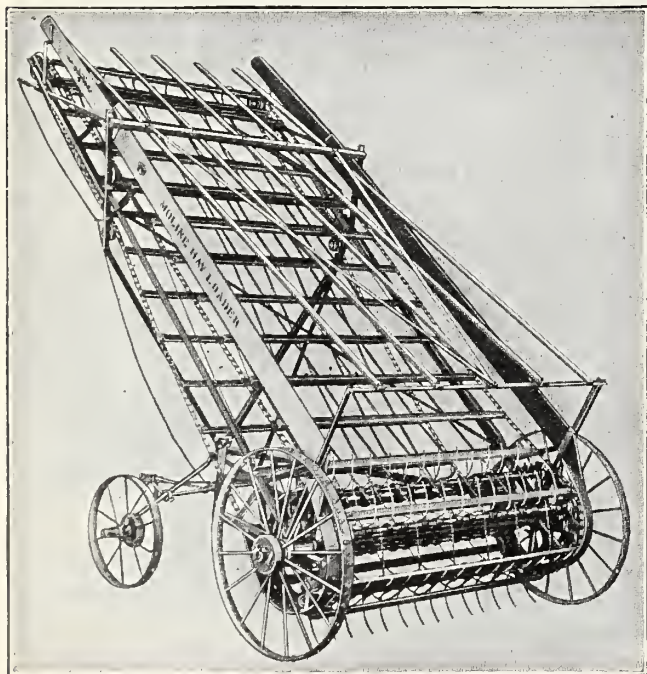
Ask for special circular and price

Champion Hay Tedders

The Champion Hay Tedder is mounted on a substantial tubular steel main frame that holds the working parts in alignment under the severest strains. The clutch lever for controlling the operation and the hand lever for raising and lowering the forks are both within convenient reach of the driver's seat. The crank-shaft is mounted in three long bearings which hold it in perfect alignment, prevent binding and insure smooth, easy operation.

The fork-tines are made of oil-tempered steel, and are held in position by long coil steel springs, which permit them to be brought close to the ground without becoming damaged by striking obstructions or digging into the ground. Furnished in 6-fork and 8-fork sizes.

Prices and circular on request



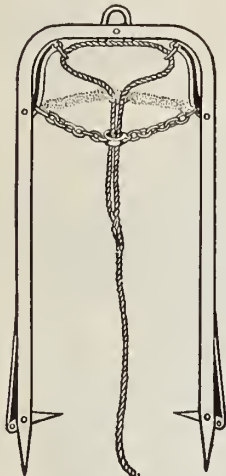
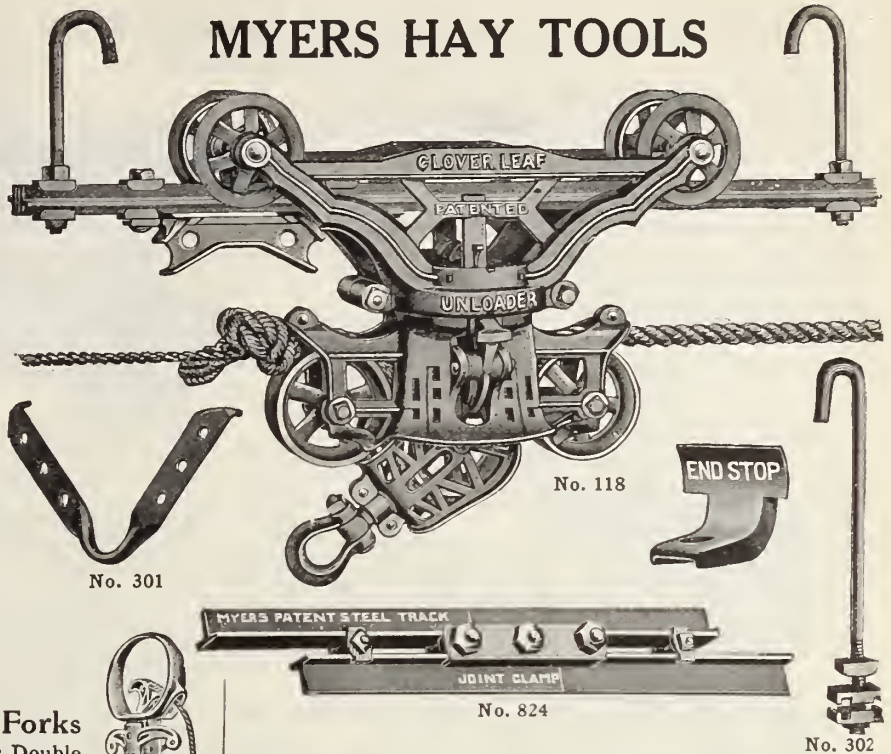
Myers Clover Leaf Unloader

Adjustable to Fit All Standard Makes of Steel Track

The Myers Clover Leaf Unloader is built of malleable iron throughout. It is heavy and substantially made. Trucks are 16 inches long. Track wheels are large and revolve on $\frac{3}{8}$ -inch turned steel axles. Lock is composed of three parts and has no springs. This Unloader has wide-open mouth to receive fork pulley when approaching in any direction. Rope sheaves have longer hub than other Unloaders. Kicker and end stop furnished with each Unloader.

PRICES

- No. 118. Unloader. Complete as described above.....\$10 25
 No. 824. Double Steel Track, as illustrated. Furnished in 6- and 12-foot lengths only. Per foot... 23
 No. 301. Steel Rafter Brackets, as illustrated. Each..... 05
 No. 302. Steel Track Hanging Hooks, as illustrated. Each..... 18
 No. 266. $\frac{3}{4}$ -inch Floor Hooks. Each..... 18

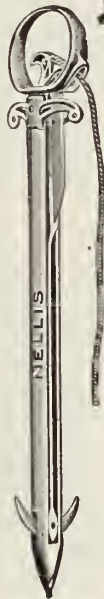


No. 1314

Myers Hay Forks

No. 1314. Myers Double Harpoon Fork. The strongest and stiffest Fork made. The flexible chain instead of a fixed cross-bar permits the Fork to enter the hay to a greater depth. \$3.25.

No. 773. Nellis Fork is constructed of extra quality material throughout. This Fork is nicely finished. Point is sharp as shown in illustration. \$5 each.



No. 773

Myers Pulleys

No. 1120. Has 6-inch wood sheave, 1-inch loose pin, swivel eye. 70 cts. each.

- No. 1133. The frame has heavy ribs and swivel eye and follows the rim of the sheave to a point nearly opposite the axle. Has 6-inch hard maple sheave. 65 cts.
 No. 434. Reed Wood Frame Pulley. Has 1-in. loose pin, self-lubricating wood sheave, with steel hook. 70 cts. each.
 No. 466. Not illustrated. Same as No. 434, with swivel eye. 70 cts.
 No. 1124. Made entirely of malleable iron with iron sheave. This is the Fork Pulley for No. 118 Unloader. \$1.25 each.



No. 1133



No. 1120

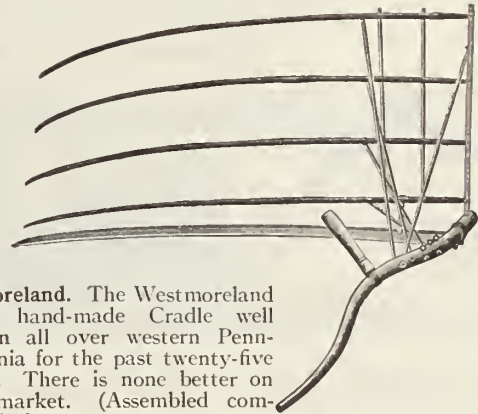


No. 1124



No. 434

Grain Cradles



Westmoreland. The Westmoreland is a hand-made Cradle well known all over western Pennsylvania for the past twenty-five years. There is none better on the market. (Assembled complete.) \$11.

- Genuine Schwob. Machine-made Cradle, 4-finger (knocked down, packed complete in carton).....\$7 00
 Extra Fingers, hand-made..... 65
 Extra Fingers, oil-sprung..... 25

Rope

We handle the best grades of Manila and Sisal Rope; especially adapted for hay-fork outfits and other hard work where a strong, serviceable Rope is required.

H. & A. "Anchor" Manila Rope. Guaranteed to be stronger than Government Standards. It is carefully spun from extra-long, high-grade Manila fiber. It will long outwear ordinary Rope, will resist water and weather, and remains pliable and easy to work with under most adverse conditions.

SIZES AND PRICES PER FOOT

	$\frac{1}{4}$ -in.	$\frac{3}{8}$ -in.	$\frac{1}{2}$ -in.	$\frac{5}{8}$ -in.	$\frac{3}{4}$ -in.	$\frac{7}{8}$ -in.	1-in.
Manila.....	$\frac{3}{4}$ c.	1 $\frac{1}{2}$ c.	2 $\frac{1}{2}$ c.	4c.	5c.	7c.	8c.
Sisal.....	$\frac{1}{2}$ c.	1c.	2c.	3c.	4c.	5 $\frac{1}{2}$ c.	6 $\frac{1}{2}$ c.

Blizzard Ensilage Cutters

GEARS RUN IN OIL

Quality of Work, Capacity, Performance, Safety, Convenience, and Durability, are the factors by which the value of an Ensilage Cutter is determined.

QUALITY

The Blizzard massive, reinforced, semi-steel cutting wheel carries knife through full throat of corn with no vibration.

The Blizzard outer bearing support prevents knife being pulled to or from shear plate as belt is tightened, these features allowing perfect knife adjustment.

The Blizzard spring pressure on upper feed roll is a counteracting influence against dull knives drawing corn in. The result of these features is better cut ensilage.

CAPACITY AND PERFORMANCE

At a State University Test a **Blizzard**, running at 571 R.P.M. on $\frac{1}{4}$ -inch cut, cut and elevated into a 53-foot silo in one hour $11\frac{3}{4}$ tons of corn on an average of $13\frac{1}{4}$ H.P. (Full report furnished on request.)

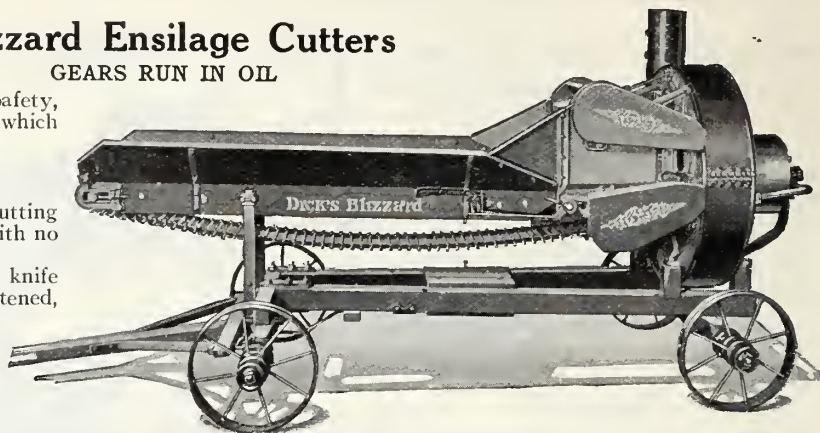
At Hudson, Ohio, the Cleveland Boys' Farm has a silo 49 feet high inside a large round barn. A **Blizzard** was set outside of the barn, 49 feet from the silo; 74 feet of pipe were used, erected at angle of over 45° , and silo was filled with cutter outside of barn; no more backing teams out of barn after unloading was necessary. That is performance.

SAFETY AND CONVENIENCE

Gears are enclosed and run in oil on the **Blizzard**, eliminating the hazard of fingers or clothing being caught.

The gear-shift or safety lever is placed in horizontal position on either side of feed-table 40 inches from knives. Slight pres-

Made in Three Sizes. Prices on Request



sure against this lever toward knives throws machine into reverse. Since the lever is always between operator and knives, it is impossible to be drawn into knives, thereby removing the greatest source of danger. This lever may be placed on either side of feed-table, which is a great convenience in many setups; also to either a right-hand or left-hand operator, or to take advantage of wind.

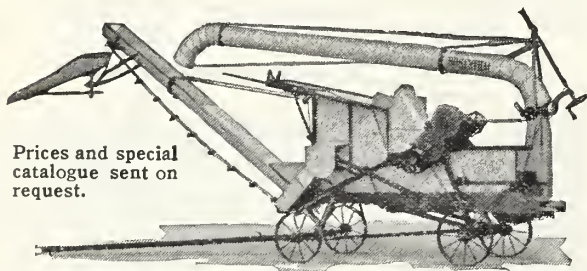
DURABILITY

Laid tool-steel cutting-edge hollow-ground knife

One-piece heavy reinforced fans. Chilled raised edge shear plate. Adjustable lower feed-roller. Gears in bath of oil. Galvanized iron non-rusting pipe, are a few points which make the **Blizzard** a durable machine.

Space prevents even enumerating all features of the **Blizzard**. If you are interested in an Ensilage Cutter, write for a **Blizzard** catalogue which not only fully describes the cutter but has helpful suggestions on ensilage and silo-filling.

Rosenthal Corn-Huskers and Shredders



Prices and special catalogue sent on request.

Rosenthal Steel "4". Capacity, 500-700 bushels a day. Easily powered by 9-18 or 10-20 H.P. tractor

MADE IN FIVE SIZES

Rated daily capacities in bushels:

No. 1, 200-400; Special "4", 300-500; Steel "4", 500-700; Medium "4", 400-800; Big "8", 700-1,500.

BUILT BY THE PIONEERS

Back in 1889, August Rosenthal perfected the first mechanical Corn-Husker and Shredder on his father's farm at Reedsburg, Wis. For seven years, August had toiled with model after model. His first machine was powered by "Prince," the old Rosenthal plow-horse.

News of its success flashed through the countryside. His determination and the encouragement of neighbors led to further experimentation and development which ended in him and his brothers establishing a factory and devoting his entire time to the Corn-Husker business.

The Rosenthal Steel "4," announced in 1925, is the latest Rosenthal achievement. It embodies every famous Rosenthal feature. Its capacity fits the needs of the greatest number of farmers.

SIMPLE CONSTRUCTION

Simple, rugged construction has always been the keynote of all Rosenthal Huskers. All Steel "4" transmission gears are of steel and are enclosed in a solid housing and constantly operate in gear-grease.

CLEAN HUSKING WITH STALKS DRY, WET OR FROZEN HARD

Every Rosenthal owner marvels at how these machines continue on, hour after hour, husking clean regardless of the condition of stalks.

SAFE TO OPERATE—NATURAL SELF-FEEDER

With all Rosenthal Huskers, the feeder stands in front, facing the machine. Bundles may be thrown on the table from either side. No spreading of bundles necessary. The feeder simply cuts the bands and lets the bundles slide down into the snapping portion of rollers. This method of gravity feed has proven the only practical way of feeding corn-stalks into machine with safety under all conditions.

EASY TO MOVE

The Steel "4" weighs 3,225 pounds—an easy haul for the same tractor that furnishes belt power. The corn-carrier is hinged and the upper part folds under, making a compact outfit for the road.

EASY TO OIL

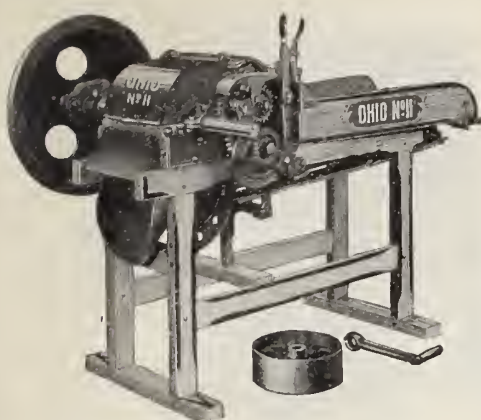
All boxes and bearings may be oiled from outside while machine is running. All main bearings and also the truck wheels are conveniently equipped with grease-cups.

SPECIAL CATALOGUES

Special catalogue and prices of the following lines not shown in this catalogue will be sent on request.

Ann Arbor Hay-Presses
Farquhar Threshers and Saw-Mills
Martin Corn-Cribs
Feed Cookers

Regardless of what you want in the line of Farm Machinery, write us before buying.



Weight, 440 pounds. Shredder blades can be furnished at slight additional cost. Price complete, with four knives, \$68.

The "Ohio" Standard Feed- and Ensilage-Cutter No. 11 S

The "Ohio" No. 11 S Cutters are powerful machines and are noted for their strength, durability, large capacity, fine workmanship, quality of materials used, satisfactory operation, and the fine quality of feed they produce. They are used for cutting all kinds of dry or green roughage, corn-stalks, hay, straw, clover, etc. They can also be equipped with carrier elevator for filling silos where only light power is available.

They have patented feeding device and throw-out lever, heavy well-balanced safety flywheel. Frame is mortised, tenoned, and pinned. Has wide and well-babbitted bearings. Knives are carefully tempered, high-carbon tool steel and are mounted on our new curved, sliding knife-blocks for accurate adjustment.

Capacity, 2,500 to 3,000 pounds dry feed per hour and 3 to 4 tons per hour on ensilage.

Power required, 2 to 4 H.P. gas.

Pulley, choice of 6-, 8-, 10-, 12-, or 14- by 4-inch face.

Length of cut, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, and 1 inch with four knives; double these lengths with two knives.

The "Ohio" No. 8½ Feed-Cutter

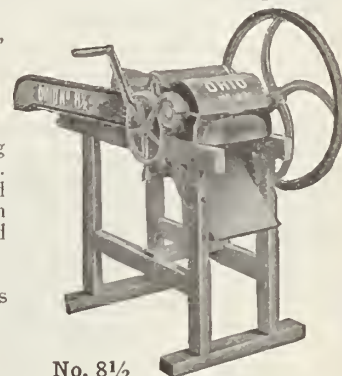
The No. 8½ is an excellent Cutter for anyone needing a small, easy-running machine for cutting all kinds of dry or green food for one or a few head of stock. It is well built and reasonably priced. The feed box is 38 inches long and has 25-inch fly-wheel. The framework is of good hardwood mortised, tenoned, and pinned. Has high-carbon steel knives, mounted on knife heads with sliding block for quick, accurate adjustment. The cutter bar is chilled iron and the patented feeding gears and rolls work automatically whether one stalk or an armful is being fed.

Capacity. Cuts one bushel of hay in thirty to forty seconds.

Length of Cut. Cuts $\frac{1}{4}$ -, $\frac{1}{2}$ -, $\frac{3}{4}$ -, and 1-inch lengths with two knives or double these lengths with one knife.

Pulley for Power. Choice of 8- or 10- x 3-inch pulley can be supplied.

Weight, 175 pounds. With 2 knives, \$32; Pulley \$1.50 extra.



No. 8½



The Geneva Feed-Cutter

KNIFE ON FLY-WHEEL TYPE

The Geneva is adaptable to all kinds of green or dry roughage, hay, corn-stalks, clover, etc. The frame is of hardwood; bottom rails reinforced with steel rods. Joints are mortised and tenoned. Frame is made triangular, giving it a firm foundation on any surface. The knives are straight, flat, of the best quality, easily adjustable to the shear-bar, and can be removed, ground, and replaced easily.

No. 8. Has two 10-inch knives and is intended for hand-use only. It cuts five different lengths, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, and $1\frac{1}{4}$ inches, and the change can be made in a moment. Price \$47.

No. 10. Has two 10-inch knives and is intended for both hand and power. It cuts five different lengths, same as No. 8. The gearing is covered to prevent accidents, and it is provided with a lever which not only throws it in and out of gear but reverses the motion of the rollers when desired. Price, with Crank Attachment and Pulley, \$56.

No. 12. Has two 13-inch knives and is intended for both hand and power. Cuts six different lengths, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, 1, and $1\frac{1}{4}$ inches. It has its gearing protected and also has a lever for controlling the rollers, by means of which they can be stopped or made to revolve forward or backward at will. Price, with Crank Attachment and Pulley, \$65.

The "Ohio" No. 771 Poultry Feed-Cutter

This Cutter was designed to meet the demand of the poultryman for a large-capacity machine. Its wide throat and the ample raise of the feeding-roller insures a volume of work that is limited only by the energy of the operator. A bushel of hay can be readily cut in 25 seconds. It is made of best materials throughout, with guard over gears. Has four $11\frac{1}{4}$ -inch high-carbon tool-steel knives. It will cut as short as $\frac{1}{8}$ inch, or short enough for small chicks, and will handle all kinds of rough feed, green or dry, such as clover, alfalfa, vegetable tops, hay, straw, corn-stalks, etc. Lengths of cut, $\frac{1}{8}$ -, $\frac{1}{4}$ -, $\frac{3}{8}$ -, and $\frac{1}{2}$ -inch lengths with four knives; double these lengths with two knives. Shipped knocked down. Weight, 195 pounds. Choice of 8 x 3 or 10 x 3-inch pulley can be furnished. Price \$35; Pulley \$1.50 extra.



Quality Goods Pay Best. They Usually Satisfy and Cheap Things Do Not



Barrett's Everlastic Mineral-Surfaced Roofing

EVERLASTIC IS AN UNUSUALLY GOOD MINERAL-SURFACED ROOFING

Used on all kinds of steep-roofed buildings for Roofing, for flashings or valleys and as a starting strip for shingles it is unusually durable and trouble-proof. The felt base, asphalt saturant, and asphalt coating are of the very best quality—generously used. Every step in the manufacture is under continual laboratory control.

The surfacing is natural mineral in unfading colors, securely embedded so the Roofing does not require painting or staining.

Each roll contains 108 square feet and galvanized nails and cement for proper application. Detailed direction sheet in each roll. Furnished in either

Red or Green. Width of roll 36 inches. Weight 85 to 90 lbs. \$2.90 per roll; 10-roll lots, \$2.75 per roll.

Barrett's Vitex Smooth-Surfaced Roofing

Here is a Roofing that gives good service at a medium price—for steep-roofed buildings, for valleys, flashings, etc.

The base is a good-quality felt, thoroughly saturated, and then thickly coated with asphalt, refined in our own plants especially for use in smooth-surfaced roll Roofings. Both sides have medium corrugations and are surfaced with talc. Each roll contains 108 square feet and nails and cement for proper application. Detailed direction sheet in each roll. Width of roll 36 inches. Roll

Medium.....\$2 10

Heavy.....2 45

10-roll lots, 10 cts. per roll less.

Barrett's Tomahawk Smooth-Surfaced Roofing

A low-priced Roofing for temporary buildings, sheds, out-buildings, etc.

Tomahawk is made in the usual manner by saturating and coating dry felt with asphalt. Both sides are finished with broad corrugations and talc surfaced. Considering its low price, Tomahawk represents a very good value.

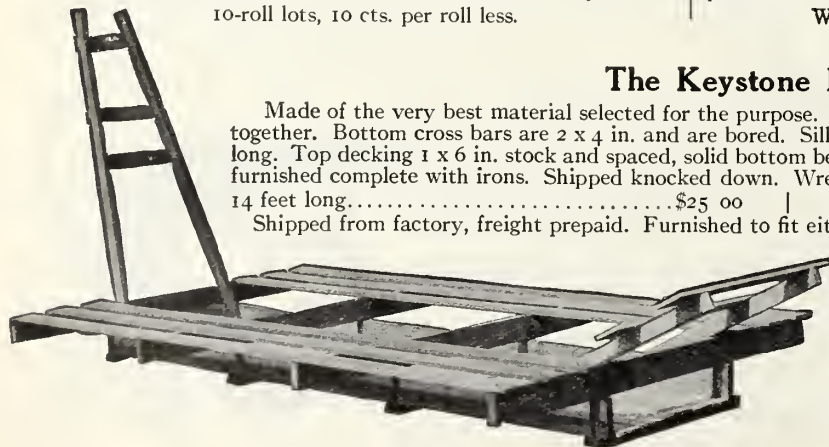
Each roll contains 108 square feet and nails and cement for proper application. Detailed direction sheet in each roll. Width of roll 36 inches.

Roll
Light.....\$1 30

Medium.....1 60

Heavy.....1 90

10-roll lots, 10 cts. per roll less.



The Keystone Hay Rack

Made of the very best material selected for the purpose. All pieces dressed and cut to exact size ready to put together. Bottom cross bars are 2 x 4 in. and are bored. Sills are 2 x 10 in. and top cross pieces 2 x 6 in. x 82 in. long. Top decking 1 x 6 in. stock and spaced, solid bottom between sills. The racks are treated with creosote and furnished complete with irons. Shipped knocked down. Wrench and hammer are only tools required to set up. 14 feet long.....\$25 00 | 16 feet long.....\$27 50

Shipped from factory, freight prepaid. Furnished to fit either 38- or 42-inch bolsters. In ordering please specify width of bolster.



No. 20

Banner Root-Cutters

These machines will cut and prepare beets, carrots, turnips, mangels, and all other roots and vegetables for feeding cattle, horses, sheep, and hogs. Roots make a very succulent food for stock but must be chopped before feeding, to prevent choking.

No. 20. Operates by hand. Capacity 30 bushels and up an hour.

Equipped with iron grating to sift soil from roots before reaching knives. A dependable machine in every respect. Price \$20.

No. 16. Supplied with balance-wheel, pulley, and crank, so it can be used by power or hand as desired. It is considerably larger than the No. 20. Weight about 150 pounds. Price complete, Pulley and Crank, \$32.50.

For prices of Root-Cutters for poultry, see page 175

H. & A. "Star Brand" Binder Twine

"Star Brand" Twine is evenly spun from the best fibers, is of full yardage and strength, and is used from coast to coast by farmers who claim it is never cut by insects.

H. & A. "Star Brand" Binder Twine is guaranteed to have the yardage claimed for it, to have ample strength for binding purposes, and to work satisfactorily in any properly adjusted binder.

We furnish both Sisal and Standard. 500 feet to the pound.



Write for prices specifying quantity wanted

Baby Chicks

For many years we have made a specialty of Baby Chicks and can furnish all popular breeds. Also White Pekin Ducklings and Bronze Baby Turkeys.

Write for price-list



Brushes

No. 1932. 2-in. utility brush. 45c. ea.
No. 210. 2½-in. varnish brush. 95c. ea.
No. 10. 4-in. house brush. \$2.95 each.

Above Brushes are made of pure China bristle with solid center and vulcanized in rubber.

No. 1018. For applying Liquid Roof Cement and Ebonol. 75 cts. each.



SHERWIN-WILLIAMS PRODUCTS

New Roofs for Old

It is not necessary to re-roof your buildings when the felt, shingles, or composition roofing has dried out. You can reliven and add many years to your roof by using SHERWIN-WILLIAMS Roof Coatings.

SHERWIN-WILLIAMS Roof Coatings are made from combination of pitches and oils which will not run under the heat rays of the sun and will not check in the winter-time.



Sherwin-Williams Liquid Roof Cement

Gives you a "one-piece" seamless roof that can be applied over the most hopeless roof on your place. It is reinforced with long asbestos fiber for toughness. Comes in Black. Gal. can \$1.10, 5-gal. can \$4.50, 50-gal. bbl., per gal., 80 cts.

Sherwin-Williams Ebonol

Composition roofing, exposed metal-work, refuse-tanks, pipe-lines, and similar surfaces around the farm or factory are typical uses for this economical black utility paint. Priced so low you can't afford not to use it. 1-gal. can \$1.05, 5-gal. can \$4, 50-gal. bbl., per gal., 70 cts.

Sherwin-Williams Elastic Roof Cement

Just what you have been looking for to take care of that roof with leaky flashings and gutters. Splendid for filling holes—spread it with a trowel. It remains perfectly elastic, but does not run under hot sun or crack with cold. 1-lb. can 18 cts., 5-lb. can 75 cts., 10-lb. can \$1.40, 25-lb. can \$3.25.



THE PAINT
THAT MADE
THE RED BARN
FAMOUS

A Handsome, Well-Painted Barn Indicates a Prosperous Farm

You want your premises to reflect your ability as a good farmer. A poorly painted barn looks down at the heel and soon requires costly repairs in order to protect equipment and produce stored inside. SHERWIN-WILLIAMS Commonwealth Barn Paint keeps barns and cribs looking attractive. It is economical because it is not only sold at an unusually low price but is strictly a quality paint with excellent covering. 1-gal. can \$1.65, 5-gal. can \$8, 50-gal. bbl., per gal., \$1.55.

PROTECTED →



Sherwin-Williams House Paint

Will go farther, look better, last longer, and less gallons are required to make a satisfactory job than any other House Paint on the market. 32 beautiful shades. Send for color-card. Gloss White, \$3.70; colors, \$3.50 per gallon.



Sherwin-Williams Floor Enamel

MAKES RICH, COLORFUL FLOORS

You might call Floor Enamel "liquid linoleum" because it produces a linoleum-like floor. Don't feel bad that your floor is too discolored to varnish—enamel it. Floors really need color as much as woodwork does. Rapid drying—no inconvenience. 1-qt. can, prepaid \$1.

Sherwin-Williams Porch and Deck Paint

Boats and porches both have to look their best at all times—they're so noticeable and both get such terrific foot-punishment. A clean-painted porch is mighty attractive and it keeps dirt from tracking into the house, too. No trick to apply it; simply brush it on and it's so quick drying there's no inconvenience. 1-qt. can, prepaid \$1; ½gal. can, prepaid \$1.90.

S-W Enameloid

Just picture a favorite piece of furniture decorated with some of these lustrous colors. Anyone can produce a good job with Enameloid. Ideal for woodwork, furniture, toys, etc. Dries fast and hard, stands hard service, washes easily. 1-pt. can, prepaid \$1; 1-qt. can, prepaid \$1.75.

S-W Semi-Lustre

Here is paint made for kitchens, bathrooms, laundries, basements—wherever walls get hard wear and need frequent washing. Hard as an enamel finish, Semi-Lustre washes easily because dirt can't penetrate. Use on both walls and woodwork. 1-qt. can, prepaid \$1; 1-gal. can, prepaid \$3.30.

S-W Mar-not Varnish

The finest Varnish made, and the most economical. Tough enough for floors; fine enough for woodwork. Rapid drying. 1-qt. can, prepaid \$1.45; 1-gal. can, prepaid \$4.95.

Owing to the unsettled condition of the price of raw material entering into Paint at the time our Catalogue goes to press, prices quoted above are subject to change without notice. If prices are reduced, customer will receive the benefit of the lower price; in case of advance notice will be given before shipping.

We pay transportation to your station or post office on Paint

BOWSHER GRINDING MILLS

WRITE FOR SPECIAL
CATALOGUE

These machines represent the highest achievement in practical feed mill construction. Their convenience and simplicity of operation, wide range of usefulness, durability of construction, and beauty of design place them preëminently in a class by themselves. Nothing has been spared in the construction of Bowsher's "Combination" mills to make them thoroughly efficient "general purpose" grinders.

Aside from the high class of workmanship characterized throughout the Mills, the feature that makes them unique among grinders is the peculiar type of cone-shaped grinding plates employed, which secure for the Mill many advantages in the way of light running qualities, large capacity, and economy of operation. The "Combination" Mills are manufactured in eleven sizes, for use with from 2 to 25 horse-power, and are fully described in a special circular which will be mailed on request. Suitable "sacking" or "wagon-box" elevators furnished for all sizes when desired.

Size No. 8. The No. 8, shown here with elevator, incorporates all the advantages peculiar to the "Combination" line: The cone-shaped grinders, which present a larger grinding surface close to the center of the shaft and run empty without injuring themselves; the wooden relief lever, by which the grinders may be instantly thrown wide apart to prevent choke-up or eliminate foreign substance; perfect lubrication of all bearings; positive feed for ear corn; and the divided hopper which handles ear corn, with or without the shuck, and any kind of small grain at the same time, crushing, grinding and mixing the two together perfectly in any proportion desired. Power required, 10 to 15 horse-power. Without elevator, \$120; with 4-in. elevator, \$148.

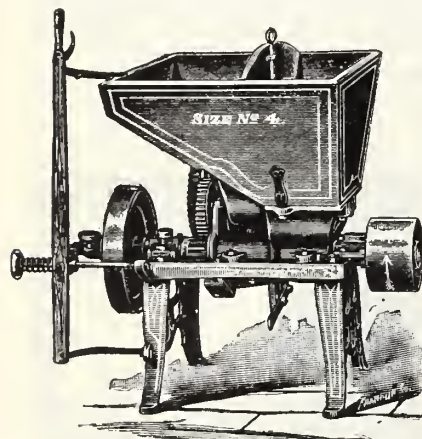
Size No. 4. This Mill is constructed on practically the same principle as the No. 8, the size representing the chief difference. It is equipped with the cone-shaped grinders, the wooden relief lever, has positive feed for ear corn, divided hopper, etc. This machine will handle successfully ear corn, with or without the shuck, and all kinds of small grain. Has perfect regulation for coarse or fine grinding, and the burs may be allowed to run empty without injury. Power required, 6 to 10 horse-power. Without elevator, \$80; with 4-in. elevator, \$108.

Size No. 0. This is the smallest Mill in the "Combination" line, but presents a high type of workmanship and construction rarely to be found in Mills suitable for very small powers. It will feed itself on ear corn and handle any kind of small grain satisfactorily. The hopper is all in one, but is sufficiently wide and long for its size. It is equipped with the cone-shaped grinders, the wooden relief lever, and many other advantages of the larger sizes. Power required, 2 to 4 horse-power. Without elevator, \$36; with 3-in. short elevator, \$51.

For description and prices of smaller Mills, see pages 172 and 173.

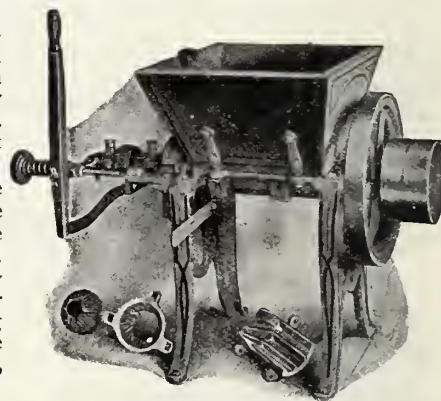


No. 8



No. 4

that ear corn may be shoveled into it. It is equipped with the cone-shaped grinders, the wooden relief lever, and many other advantages of the larger sizes. Power required, 2 to 4 horse-power. Without elevator, \$36; with 3-in. short elevator, \$51.



No. 0

Clipper Grain and Seed Cleaner

The Clipper has no worthy competitor. It is used by seedsmen almost exclusively. No other Cleaner cleans so clean—none other sells so cheap. It will last a lifetime and earn its cost every year it is used on a well conducted farm.

The Clipper screen outfit is very complete for the work required and contains screens for wheat, oats, barley, rye, red and alsike clovers, alfalfa, sweet clover, timothy, millet, flax, peas, beans, cowpeas, soy beans, grading seed corn, cleaning clover containing buckhorn, plantain or ripple, cleaning timothy seed containing pepper grass and sorrel, also cane seed, milo maize, kaffir corn and separating corn from oats.

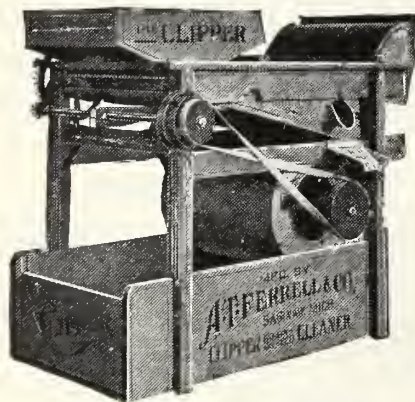
The vertical air blast of the Clipper is a feature that no other Cleaner has, and it makes possible the most difficult separations that can be made in no other way. For instance, in cleaning seed grain, if the belt is properly adjusted on the pulleys, so as to get the correct speed of the fan and if the turning is regular, you can remove the light grains from the heavy, to the extent that the weight of the grain being cleaned can be raised from 3 to 5 pounds per bushel.

No. 1-B Clipper is a farm-size hand-mill that will clean 20 bushels of seed wheat per hour, or 10 bushels of clover or timothy seed per hour. Dimensions: Length, 4 feet 8 inches; width, 2 feet 2 inches; height, 3 feet 8 inches; weight, crated, 185 pounds.

Twelve screens, 19 inches wide and 22¼ inches long, go with the No. 1-B Mill, an outfit suitable for cleaning seed wheat, rye, oats, corn, barley, peas, beans, clover, timothy seed, other grass seed, garden and vegetable seeds.

Plain directions for separating go with each Mill. These are so easily understood that anyone can learn in a few minutes how to make the most delicate separations. \$40. Power Pulley, 6-in. d.am., \$1 extra.

The No. 2-B Clipper does exactly the same work as the No. 1-B. Its capacity per hour is 25 bushels grain and 15 bushels of grass seed. The screens (12 in number) are 6 inches wider than the No. 1-B screens. Dimensions of No. 2-B are 4 feet 8 inches long, 2 feet 8 inches wide, 3 feet 8 inches high; crated weight, 210 pounds. No. 2-B can be run easily by hand for cleaning grass seed, but for cleaning grain some kind of power should be applied—½ horse-power is sufficient. Price with 6-in. diam. Power Pulley, \$48.



The No. 1-B Clipper Seed Cleaner

Perry Automatic Scrapers

Built to withstand severe service

Operates with tractor in continuous forward motion

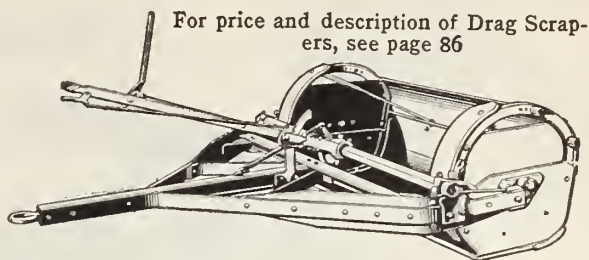
Perry Scrapers fill when, where, and how you want them filled. The loading is easily controlled by Tractor Driver. This flexibility of loading control is a real advantage with Perry.

The control lever brings the load out of the ground with ease, and it rides to the dump on the heavy wear plates. The angle of incline of the bowl can be manually regulated to reduce waste on the runway to a minimum.

Dumping the Perry is also controllable. The load can be spread to any desired grade or dumped in a heap, a very desirable feature, especially when making fills. All this can be accomplished without stopping the tractor.

	Length of bowl	Approximate average capacity	Approx. shipping weight	
No. 20.	4 feet	16 cubic feet	575 pounds.....	\$119 00
No. 10.	5 feet	27 cubic feet	670 pounds.....	126 00

Ask for special circular. Larger sizes quoted on request



For price and description of Drag Scrapers, see page 86

The Jumbo Concrete Mixer

Have you ever figured out just how much time and money a good Concrete Mixer would save you?

A Jumbo, for example, with a squad of four men, will do the work of from 8 to 10 men at hand-mixing, which means a saving of at least \$15 a day—and a better mix can be obtained.

The Jumbo was designed, after months of careful study, by experienced engineers. Their object was to develop a Mixer, simple in design, and yet rugged enough to hold up for years of constant service.

No. 2½, shown at the right, meets the requirements of the farmer or contractor who already has a power plant of one horsepower or over. It has a capacity of 2½ cubic feet (one wheelbarrow load) and is capable of pouring from 27 to 45 cubic yards of concrete per day. It can be operated by one man but it will keep a crew of four men busy.



No. 2½ Mixer

It is easy to load and easy to dump. Worked to capacity it will mix one batch a minute and mix it thoroughly. There will be no weak or porous spots in the finished job as is too often the case when the old unscientific method of hand-mixing is used.

Here are but a few of the jobs on which the Jumbo will show a profit: sidewalks, silos, foundations, cisterns, hog houses, barn floors, manure pits, storage cellars, fence posts, drinking troughs, rough plastering, septic tanks, and culverts.

A rugged reliable Mixer for the farmer and contractor. Price \$26.

Jumbo No. 2½ FS Outfit is a complete mixing unit easily transferred from one job to another and ready for operation the minute it is placed in position. The Mixer is chain-and-sprocket driven, which means efficient and economical transmission of power. The outfit consists of the Jumbo Mixer, mounted on a portable truck with the 1¾ H.P. Jumbo Engine, equipped with High-Tension Magneto and engine housing. Price \$86.

Prices on larger outfits quoted on request. Ask for special circular

No. 4 Pony Wood Saw

Showing Ripping Table Attachment

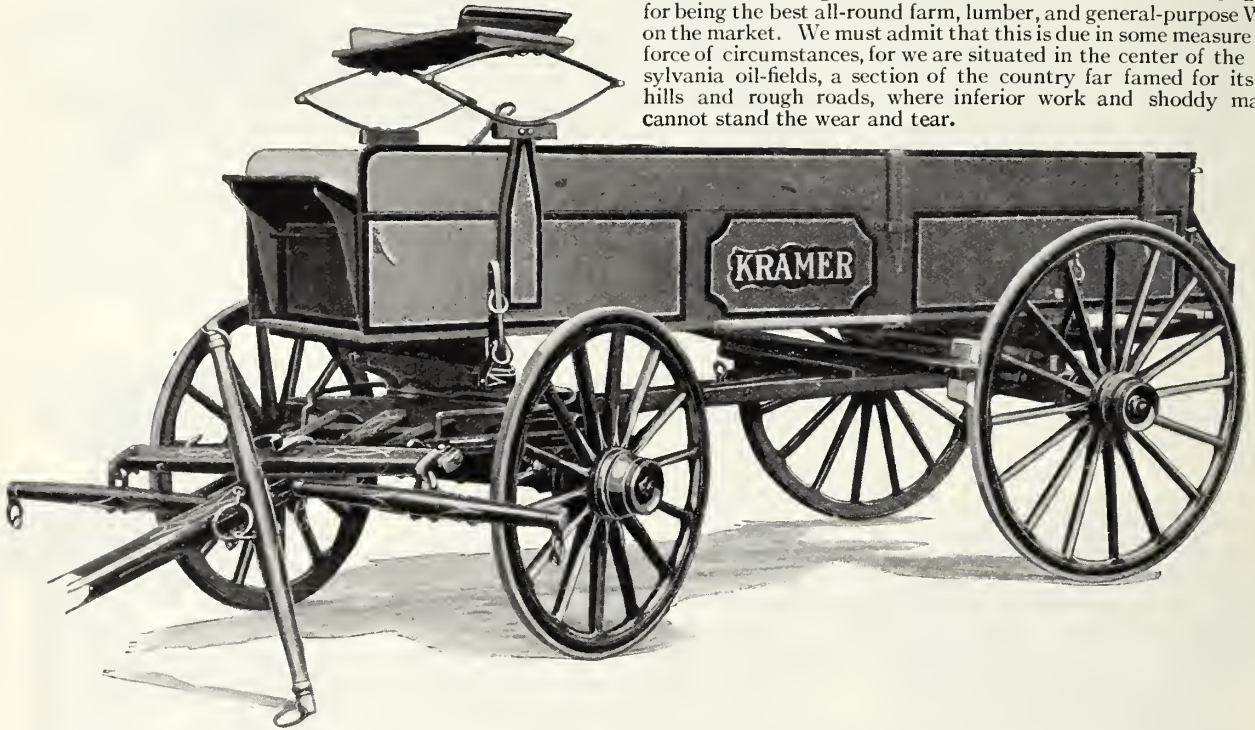
This Saw is especially built for high power. Suitable for 3 to 6 horsepower engine. With 18-inch blade it will cut round wood 8 inches thick. Frame will admit 20-inch blade. Mandrel is 3 feet 5 inches long, 1⅝-inch diameter, fitted for blades with 1⅜-inch hole. Balance wheel is 12-inch diameter, weighing 30 lbs. Boxes 3½ inches long; pulley, 5-inch face by 4½-inch diameter. Table securely hinged to frame. Weight 110 lbs. Price, with 18-in. blade, \$16.95. Ripping Table, as shown in illustration, \$4.50 extra.

Catalogue and prices of larger sizes on request



Kramer Wagons

The Kramer Wagon has established and maintained for itself a name for being the best all-round farm, lumber, and general-purpose Wagon on the market. We must admit that this is due in some measure to the force of circumstances, for we are situated in the center of the Pennsylvania oil-fields, a section of the country far famed for its steep hills and rough roads, where inferior work and shoddy material cannot stand the wear and tear.

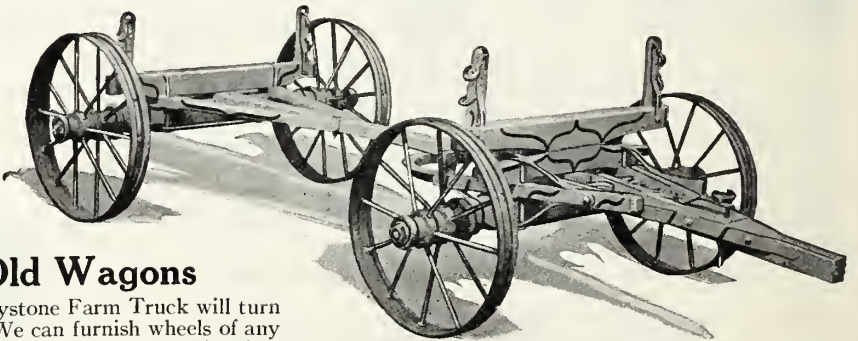


Kramer Wagons are furnished in either Wood Axle Cast Skein, Wood Axle Steel Skein, or the famous Tubular Steel Axle. They are also furnished either with Drop Tongue or Coach-Pole, Gear or Swing Brake and double Hound or Chaser Reach.

In one-horse style they are furnished with 2½-, 2¾-, or 3-inch Skein; in two-horse sizes, 2¾-, 3-, 3¼-, 3½-, 3¾-, and 4-inch Skeins. Special catalogue and prices furnished on request. In asking for prices please use the above specifications.

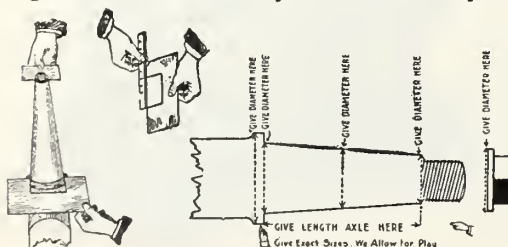
The Keystone Steel Wheel Farm Truck

The Keystone is carefully made of the best material—it is strong, convenient, and handy in every way. Axles are hickory fitted with 3¼ x 10-inch cast skeins. **Gear parts are clipped, not bolted.** Trussed axles. Round angle steel front hound, reinforced and strongly braced. Standards 10 inches high, mortised into bolster. All gear parts, with the exception of the axles, are made of select, thoroughly seasoned oak and are hand painted red, neatly striped in green. Steel wheels are standard pattern with grooved tires and staggered spokes. Track 5 feet, center to center of tires, with bolsters 42 inches wide between standards. Capacity, 4,000 pounds, for ordinary farm use. Price, with 28-inch front wheels, 34-inch rear wheels, 4 x ¾-inch grooved tire, doubletrees, neck yoke and gear brake, \$65. (Brake and Doubletrees not shown in illustration.)



Steel Wheels to Fit Old Wagons

A set of Steel Wheels like those on the Keystone Farm Truck will turn an old wagon into a low, handy farm truck. We can furnish wheels of any height and tire size to fit any skein or axle. Popular heights and tire sizes are quoted below.



	3 x ½-in. or 4 x ¾-in. tire
26 in. height.....	\$4 50
28 in. height.....	4 75
30 in. height.....	5 00
32 in. height.....	5 50
34 in. height.....	5 75
36 in. height.....	6 25

Other heights and tire sizes quoted on request. In ordering, give measurements as shown in illustration. Prices are for one wheel in quantity of two wheels or more. If only one wheel is ordered, 10 per cent additional. Prices are f. o. b. factory.

Fairbanks-Morse New "Z" Gasoline Engines

The New Fairbanks-Morse Self-oiling "Z" Engine is the perfected result of many years of Engine-development. Its simplicity of design, durability, of construction, and freedom from usual Engine trouble makes it worthy of your closest consideration.

You will find many features that mean economy, power, and longer life, advantages that make the new Self-oiling "Z" Engine do your work more quickly, easily, and at lower cost.

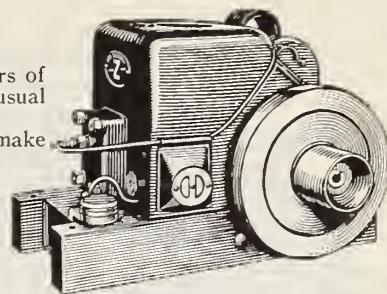
Horse-power	Rated Engine Speed	Standard Diam.	Pulley Face	Shipping Weight	Price
1½	1,500 R. P. M.	3½ in.	3 in.	160 lbs.	\$59 50
3	800 R. P. M.	6 in.	4 in.	305 lbs.	93 00
5	600 R. P. M.	10 in.	6 in.	490 lbs.	125 00
7½	550 R. P. M.	12 in.	6 in.	900 lbs.	190 00

Fairbanks-Morse Type "R" High-Tension Magneto regular equipment on all sizes.

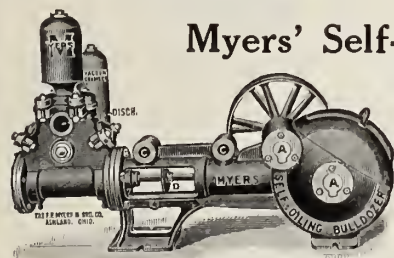
The rated speed of the 1½-H. P. Engine can be reduced to 1,100 r. p. m. by means of the speed-controller on the Engine. The speed of the slow-speed drive-shaft, which operates at half Engine-speed, can similarly be reduced from 750 to 550 r. p. m. When operating below rated speed, the horse-power of the Engine is reduced in direct proportion to the reduction in speed.

The rated speed of the 3-, 5-, and 7½-H. P. sizes can be reduced approximately 100 r. p. m. by means of the speed-controller. Here, likewise, the horse-power delivered is reduced in direct proportion to the decrease in speed.

Special catalogue on request.



1½ Horse-Power Type "Z" Engine



Myers' Self-Oiling Bulldozer Power Pump

Continuous Performance 24 Hours a Day Without Attention.

A single-cylinder, double-acting Power Pump. In the Myers are incorporated many features that are not found in other Pumps. The large gear and pinion are machine-cut from the solid—the gear is cast-iron and the pinion steel. From the oil-reservoir in the base, oil is carried by the main gear to the highest parts of the Pump, and by a system of channels distributed to all moving parts and returned again to the reservoir.

Has 2½-inch, brass-lined cylinder in one piece, attached to the power end by heavy bolts. Suction and discharge valves are easily accessible for inspection and repair without disturbing pipe connections. Suction and discharge piping may be taken from either side. No. 912. Maximum capacity, 540 gallons per hour at pump. 1¼-in. suction and discharge, 12 x 2 in. tight and loose pulley. Power required, 2 H.P. \$50.

Ask for special catalogue and prices of larger sizes



Wood Pumps

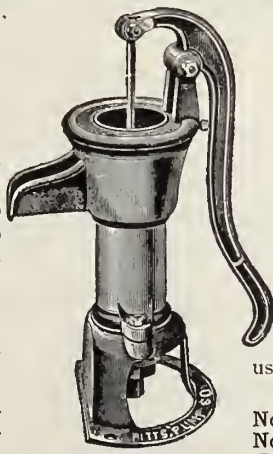
Size 6x6 in;
3½ in. cylinder

	Unlined	Porcelain Lined
6-ft.	\$8 50	\$10 50
7-ft.	9 25	11 25
8-ft.	10 00	12 00
10-ft.	12 00	14 00

Tubing for above pumps, 4 x 4 in., in 8-, 10-, and 12-foot lengths, 32 cts. per ft.

Couplings with bands for 4 x 4-in. tubing, 90 cts. each.

In ordering give depth from top of platform to bottom of well. Prices on other sizes of Wood Pumps quoted on request.



Pitcher Spout Pump



Rex

Iron Pumps

Rex Deep-Well Lift Pump

Our new pattern anti-freezing, constant-flowing Deep-Well Pump, fitted with reversible handle and improved compound handle rest. While the Pump is designed for deep wells, yet it can be used in cisterns or wells as deep as 150 feet. Furnished with either 2½- or 3 x 10-inch cylinders at the following prices:

With iron cylinder.....	\$9 00
With brass-lined cylinder.....	10 75
With brass body cylinder.....	12 50

If wanted complete with 1¼-inch galvanized pipe and ¾-inch galvanized steel rod, add to above prices 25 cents per foot for depth of well.

New Fountain Double Acting Force and Lift Pump

The New Fountain is the simplest and most efficient deep-well pump on the market. It has a double air-chamber which enables the pump to throw an absolutely solid stream, just like a hydrant. Has smooth bore cylinder and brass valve seat; made to face the front or side by simply loosening set screw at top. It will go in hole as small as 4¾ inches. The upper cylinder is brass lined. Anti-freezing.

Furnished with either 2½- or 3 x 12-inch cylinders at the following prices:

With brass-lined cylinder.....	\$17 50
With brass body cylinder.....	18 50

If wanted complete with 1¼-inch galvanized pipe and ¾-inch galvanized steel rod, add to above prices 25 cents per foot for depth of well. If Three-Way is desired, add \$3.50 to above prices. If Wind Mill Top is desired, add \$2.50 to above prices.



New Fountain

Pitcher Spout Pump

Has smooth-bore cylinder and brass valve seat, with revolving top, allowing lever to be placed at any desired position, and may be used successfully in cisterns or wells as deep as 25 feet.

PRICES

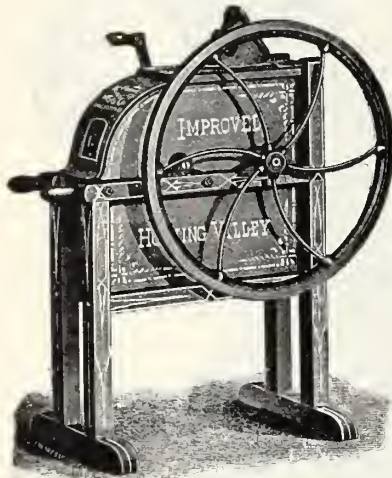
No. 2. 3-inch cylinder, polished iron, \$3; brass lined, \$5.50.

No. 3. 3½-inch cylinder, polished iron, \$3.50; brass lined, \$6.

Galvanized Pipe. 1¼-inch, cut to length and threaded, 21 cts. per ft.

Hocking Valley Corn Shellers

ONE-HOLE SHELLER



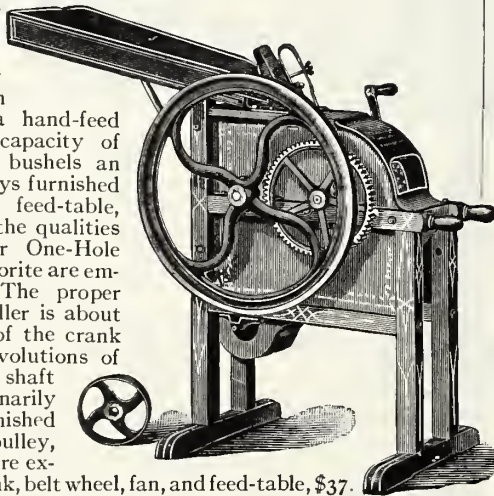
The Hocking Valley One-Hole Sheller is the standard Sheller with which all others are compared. It fully deserves all its popularity. It is carefully made of the best material that can be gotten, and is always perfectly satisfactory in its working. It is furnished either with or without fan, feed-table, and pulley, and has a capacity of from 20 to 25 bushels an hour.

PRICES

With fan	\$17 25
Without fan	15 50
Feed-table, extra ..	1 25
Clamp pulley, extra	1 25

Two-Hole Sheller

The Hocking Valley Two-Hole Sheller is intended to be used either by hand or with power. It is a hand-feed Sheller with a capacity of about 35 to 40 bushels an hour, and is always furnished with crank, fan, feed-table, and pulley. All the qualities which make our One-Hole Sheller such a favorite are embodied in it. The proper speed of the Sheller is about 100 revolutions of the crank shaft, or 300 revolutions of the balance wheel shaft a minute. As ordinarily sent out, it is furnished with an 8-inch pulley, and both shafts are extended. With crank, belt wheel, fan, and feed-table, \$37.



Black Hawk Corn Sheller

The Black Hawk Corn Sheller has enclosed hopper and separator. This prevents scattering of the shelled corn. A wonderfully fast and easy running Sheller. Instantly fastened to barrel or box by two large strong clamps with wing nuts. For illustration, see page 173. Price \$3.25; postpaid \$3.65.

No. 18 Oasis Fruit Crusher

The No. 18 was designed to meet the requirements of the user who needs only a small, low-priced, quality Crusher. It does the work and is well worth the money. Equipped with two six-pointed star-shaped iron rolls 5 inches long. The hopper, made entirely of wood, holds a half bushel, and is made to accommodate a standard size grape-box. It is attached to the wood frame by two small lugs and is easily and quickly removed for cleaning. Price \$4.85.



Hocking Valley Cider Mills

Equipped with wood-roll grinding cylinder—the most efficient all-purpose grinding device made. Guaranteed to be entirely satisfactory in execution, ease of operation, capacity, durability, and finish. Manufactured from the best materials obtainable by skilled workmen, they maintain that high standard of quality and excellence for which all Hocking Valley goods are famous. Bearings bored and reamed to machine fit. All cross rails reinforced with steel tie rods. Hardwood slats riveted at both ends, not nailed. All joints mortised and tenoned. Bottom side rails, a distinct feature. Bottom pressing head mortised, tenoned, and gained. Special Acme Thread, die-cut steel screw. Bearings bolted to side rail. Laminated hardwood cylinder, grain opposed. Crucible steel serrated knives. Mills furnished with plain tubs at prices named.



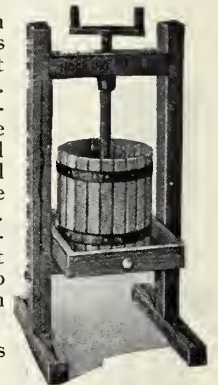
Bantam Mill. 1 tub.....	\$19 50	Medium Mill. 2 tubs.	\$31 50
Junior Mill. 2 tubs.....	26 00	Senior Mill. 2 tubs...	45 00

Power Pulley for all Mills except Bantam, \$2 extra.

The Hocking Valley Fruit Press

In the design, construction, and selection of materials for the Hocking Valley Presses we offer a product superior in every respect to any hand Fruit Presses on the market. Frames are of selected, well-seasoned hardwood, finished in the natural color of the wood. All posts and feet mortised and tenoned, and bottom cross-piece reinforced with steel torsion rods, making an absolute rigid construction to withstand hard usage. Cross-heads are of hardwood, with a cast-iron nut for the screw securely fastened at the bottom, and a cast washer on the top to prevent the wobble so often found on presses with wood cross-heads.

Furnished with hinged tubs at prices named.



- No. 1A. Size of Tub 10 x 10 1/2 in., capacity about 10 qts., \$6.50.
- No. 2A. Size of Tub 11 1/2 x 11 1/4 in., capacity 1/2 bus., \$7.50.
- No. 3. Size of Tub 14 1/4 x 12 1/4 in., capacity 3/4 bus., \$10.

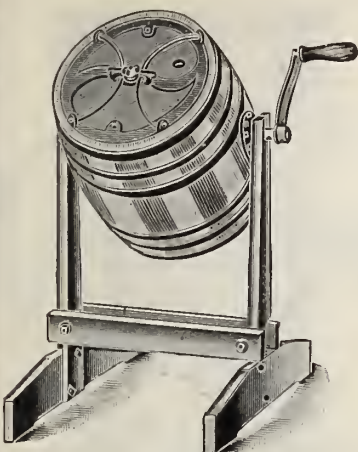
No. 0 Oasis Wooden Fruit Press

FOR USE ON TABLE OR BENCH

The No. 0 Oasis Fruit Press is a small, durable, reasonably priced wood Press for home use. Frame is made entirely of selected hardwood. The sides are bolted to cross-pieces and feet by heavy 18-inch bolts which fit in grooves in upright pieces. The tub slats are beveled and are riveted to heavy steel bands. The Steel Press Screw has a clean-cut thread and operates through a heavy nut which completely surrounds the cross-head. This type of nut not only adds strength to the cross-head, but acts as a support at top, preventing the wobble usually found on small Presses.

Size of tub 9 x 9 1/4 in. Capacity about 8 quarts. Price \$4.75.





The Favorite Barrel Churn

Made of the best quality of white oak, thoroughly seasoned and kiln-dried, having galvanized iron rim in head, making it as strong as a barrel with two solid heads.

The frame is substantially built and made of hard wood.

No Churn works so easily, no Churn cleaned more quickly, having no dashers or paddles. The churning is done by revolving the Churn, which agitates the cream and makes the butter separate from the milk.

	Total capacity	Will churn from	Price
No. 0.	6 gallons	1 to 3 gallons.	\$8 00
No. 1.	10 gallons	1 to 5 gallons.	9 00
No. 2.	15 gallons	1 to 7 gallons.	10 00
No. 3.	20 gallons	2 to 10 gallons.	12 00
No. 4.	25 gallons	2 to 12 gallons.	14 00
No. 5.	35 gallons	3 to 17 gallons.	16 00
No. 6.	50 gallons	5 to 25 gallons.	30 00
No. 7.	60 gallons	6 to 30 gallons.	34 00
No. 8.	80 gallons	7 to 37 gallons.	40 00
No. 9.	100 gallons	10 to 50 gallons.	48 00

Frames included at above prices for all sizes up to and including No. 5. Frames for larger sizes, extra, \$4.50. The larger sizes are often hung between two upright posts instead of a portable frame.

POWER PULLEYS

Single Pulleys

10-inch with shaft.....	\$2 25
12-inch with shaft.....	2 25
14-inch with shaft.....	3 00
18-inch with shaft.....	3 75

Double Pulleys

10-inch with shaft.....	\$3 75
12-inch with shaft.....	3 75
14-inch with shaft.....	5 00
18-inch with shaft.....	6 25

12-inch Pulleys for Nos. 0, 1, 2, and 3 Churns; 14-inch Pulleys for Nos. 4, 5, and 6 Churns; 18-inch Pulleys for Nos. 7, 8, and 9 Churns.

Taylor Electric Barrel Churn

The principle of the Barrel Churn is well known, as it has been in use for many generations. The Taylor is constructed of selected oak; the frame is of hardwood reinforced with metal braces and equipped with metal bearings. Standard, heavy-duty, splash-proof type, 110-volt AC motor, complete with cord and plug and V-type belting.



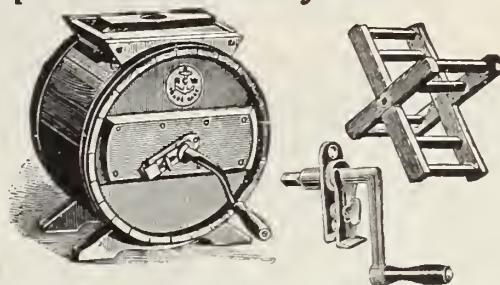
No.	Total Capacity	Churning Capacity	Price
10.	10 gals.	5 gals.	\$50 00
15.	15 gals.	7½ gals.	55 00
20.	20 gals.	10 gals.	60 00
25.	25 gals.	12½ gals.	65 00
35.	35 gals.	17½ gals.	75 00
50.	50 gals.	25 gals.	95 00

For 32-volt DC motor, \$3 extra.

Dandelion Brand Butter Color

Have your butter uniform in color in June and in January. Give butter the "high price" shade uniformly—the year round. Practically every large creamery in the country uses Dandelion Brand Butter Color, which proves it is kept up to the highest standard of quality. It is purely vegetable and meets the full requirements of all food laws, State and National. Small Size 35 cts., Medium Size 65 cts., Large Size \$1; postpaid, 10 cts. extra.

Improved Cedar Cylinder Churn



Our Improved White Cedar Cylinder Churn has a double dasher, and the crank is locked to the churn with a clamp and thumb screw, which prevents leakage. Lock cannot break. The top is large, and dasher easily removed. Hoops are of galvanized iron and will not rust. The best Churn in use. All castings are heavily tinned.

No. 1.	3-gallon.....	\$5 00
No. 2.	4-gallon.....	6 00
No. 3.	7-gallon.....	7 00
No. 4.	10-gallon.....	8 00

White Cedar Staff Churns

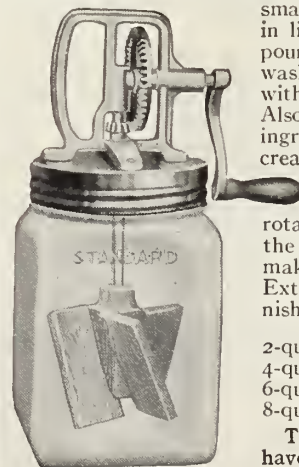
Our popular Staff and Dash Churns are made of selected, seasoned Virginia white cedar, and are bound with electric welded galvanized wire hoops. Fitted with handsome covers and hardwood staffs and dashers. These White Cedar Churns are carefully made, sweet, hygienic, and very light to handle.

16-in. Churns	3 gallons.....	\$1 65
18-in. Churns	4 gallons.....	1 85
20-in. Churns	5 gallons.....	2 15
22-in. Churns	6 gallons.....	2 50
24-in. Churns	8 gallons.....	3 15
26-in. Churns	10 gallons.....	3 50



Standard Glass Churns

Latest Improved Butter Churn. You can make butter for home use in from 8 to 10 minutes. Easy to clean. All except the small size have perforated draining cap in lid which permits buttermilk to be poured out and water poured in for washing butter. Churn is clear glass with rounded corners and large mouth. Also used extensively for mixing cake ingredients, beating eggs, whipping cream, and mixing salad dressing. The scientific construction of the 4-blade hardwood dasher, giving a rotary motion to the cream against the square sides of the churn, is what makes it the best churn ever made. Extra jars for Glass Churns can be furnished.



	Postpaid
2-quart.....	\$1 50
4-quart.....	2 50
6-quart.....	3 00
8-quart.....	3 75

Thousands of these Glass Churns have been sold in the last few years and have the approval of every house-

wife who has used them.

Avery Ball-Bearing Cream Separator

With Suspended Spindle and Floating Bowl

This wonderful new Avery is the one Separator you will unquestionably desire to own the moment you have seen it demonstrated. It skims clean—gets the cream to the last trace—produces better cream and more of it.

It combines all the best features of other well-known Separators. *It is completely free from all neck bearings, neck-bearing springs, bushings, steel points, and other troublesome parts, yet the price is moderate!*

It is so simple, so "foolproof" in construction, that a 14-year-old boy can take it apart and put it together again in just a few minutes.

It is so durable it will give years of steady service uninterrupted by repairs and replacements, requiring no attention save *oiling once a year*.

It is most attractive in appearance, its design and finish being entirely outstanding.

And on top of all this, the Avery is really easy to run and easy to clean. Due to the new Avery Self-balancing Floating Bowl, Suspended Ball-bearing Spindle, and other patented features, this Separator positively runs easier than any other machine of equal capacity, and a demonstration will prove it.

See the Avery at once. Turn the handle. Note how easily it turns, how steadily the bowl spins, how quietly it spins, and how long it continues to spin after you "throw off the power." Then take the bowl apart. Do it yourself. Let your wife do it. See how easy it all is.

But not until you have actually separated cream with the Avery will you appreciate the full significance and value of this wonderful machine. It will save labor over all others, give you better cream and more of it, increase your cream check regularly! In effect it will add another cow to your herd!

An Avery Quickly Pays for Itself

If you have two or more cows, an Avery will quickly pay for itself in the profit it gives you in cream—a source of income that thousands of farmers are now working to the limit.

If you are skimming by hand, you are losing from one-eighth to one-third of your cream. Then, too, you are not getting the heavy, smooth quality of cream a good Separator gives. Furthermore, any milk that is skimmed when fresh keeps longer. Such milk can be fed to the calves and other stock while it is still warm and sweet and at its highest feeding value.

So operate a Cream Separator! Have a steady cash income! You are living but once. Get from life more of the good things a bigger cream check will bring you. Furnished without stand to bolt to table or bench or with stand as shown in illustration.

	Capacity per hour	Price		Capacity per hour	Price
No. 15. Without Stand	175 lbs...	\$30 00	No. 30. With Stand	300 lbs...	\$55 00
No. 15. With Stand	175 lbs...	40 00	No. 40. With Stand	400 lbs...	70 00
No. 20. Without Stand	225 lbs...	40 00	No. 50. With Stand	500 lbs...	80 00
No. 20. With Stand	225 lbs...	50 00	No. 70. With Stand	750 lbs...	110 00

Price of Electrical Attachment quoted on request.

Before you buy a Cream Separator, call and see the Avery, or send for descriptive circular.



Improved Champion Milk Cooler



It is a perfect aerator, removing all flavors arising from excessive cabbage, turnip, or silo rations.

It is a thorough cooler, reducing the temperature of the milk instantly nearly to the temperature of the cooling medium.

It is low down, combining greatest cooling surface with least height.

It is simple in construction and as easily cleaned as a pail.

Fast Cooling Important. It is but the work of a moment to fill the Improved Champion with cold or ice water, or at-

tach a 1/2-inch stream of flowing spring water. If the agitator is used it keeps the medium circulating near the cooling surface. The milk flows over the cooling surface through machine-punched holes scientifically caledrated so that milk film is even and cooling is sure and certain.

The following sizes of the Champion are gauged as nearly as possible to take care of the milk as fast as drawn from various sized dairies with the average number of milkers. Be sure to get one large enough, as best cooling results are obtained with low pressure of milk in the receiver.

Capacity milk receiver	Size of dairy	Takes care of	Price
No. 2.....18 qts.....	1 to 25 cows....	3 milkers....	\$8 00
No. 3.....34 qts.....	25 to 50 cows....	5 milkers....	9 60
No. 4.....52 qts.....	50 to 100 cows....	8 milkers....	12 00

Star Cream Separator

Easiest, Cleanest, Simplest Cream Separator of its Kind on the Market. Reversible Strainer, Cover and Aerator—Inclined Bottom.

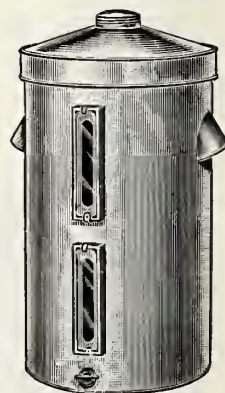
Made of the best material to be found on the market, with the most perfectly constructed bottom, allowing every particle of cream and milk to be drawn, without disturbing the can, thereby preventing all liability of remixing cream and milk after being separated.

DIRECTIONS. Place the Separator on a bench or box in any convenient place, with the front projecting over a little so that a pail can be placed under the faucet, without disturbing the can when drawing off the milk and cream.

Place cover, inside up, on Separator and pour your milk through the strainer into the Separator. In warm weather dilute with same amount of water that you have of milk; in cold weather, or if water is more than ordinarily cold, a less amount has been found to be sufficient; then replace cover after changing strainer to outside of cover and allow to stand.

Price List—With Cover

No.	Capacity	Quarts	Price
0. 1 cow.....	24.....		\$3 50
1. 1 to 2 cows.....	48.....		4 25
2. 3 to 4 cows.....	68.....		4 50
3. 6 to 8 cows.....	118.....		6 00



The New Hinman Grooming Machine

INCREASED PROFITS AND SANITATION



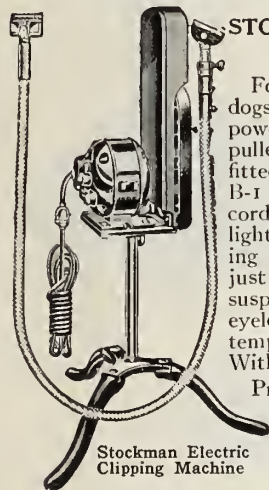
There is profit in grooming the Hinman way, because grooming brings to the dairy cow complete comfort, resulting in greater milk-production, better health, and finer appearance, together with more sanitary surroundings.

The New Hinman Grooming Machine actually gets down to the bottom and removes all the dirt, dust, dead hair, and dandruff, leaving the pores open and the skin healthy. The cow is comfortable and, as the result of this, her whole energy is directed toward the secretion of milk. In addition, you have bagged all of the filth so it can be disposed of forever, leaving the air, feed, and water dustless and sanitary.

Thoroughly groom your cows or horses with the Hinman Groomer before you start clipping. This removes all the dirt which dulls the cutting-blades. A thorough grooming after clipping finishes the job with real satisfaction.

The Hinman Grooming Machine is made in two sizes—Senior and Junior. Write for prices and special circular.

Clipping and Shearing Machines



STOCKMAN ELECTRIC CLIPPING MACHINE

For clipping cows, horses, mules, and dogs. This is a quiet, smooth-running, powerful Clipping Machine. Belt and pulleys shielded with a steel guard. Is fitted with latest model Stewart patented B-1 clipping head and a 15-foot extension cord, with through switch. Plugs in at any light socket. Made to use in either hanging or pedestal position. For hanging, just unscrew from pedestal, invert, and suspend from above by means of steel eyelets in bottom of motor base. Spring-tempered coil steel shaft is 6 feet long. With $\frac{1}{4}$ H. P., 110-volt A. C. Motor, \$37.50.

Prices on other motor specifications will be quoted on request.

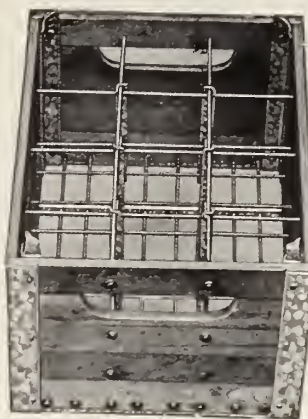
When ordering Electric Clipping and Shearing Machines, be sure to specify whether for alternating current or direct current. If for alternating current, give the cycle and voltage; if for direct current, be sure to specify the voltage.

Special catalogue and prices of attachments and repair parts on request.

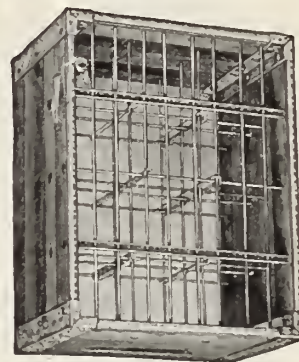
STOCKMAN ELECTRIC SHEARING MACHINE

For sheep and goats. This machine can be used either as a pedestal type or hanging type. The machine is supplied complete with jointed shaft, belt, pulleys, Stewart No. 7 ball-bearing shearing handpiece, 2 combs and 4 cutters. The shaft is Universal jointed and assures full freedom of shearing motion back and forth. (Not illustrated.) With $\frac{1}{4}$ H. P., 110-volt A. C. Motor, \$44.

Armor-Klad Bottle Cases



Top View

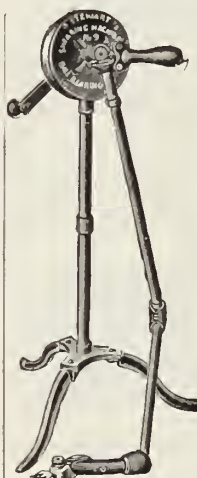


Bottom View

Armor-Klad Cases are built so strong that even at the first glance you are impressed with their exceptionally fine construction. Armor-Klad Cases will stack with all standard Cases, and once you use them you will soon want to replace all your crates with Armor-Klads.

The top view shows the rigid construction, the lapping corners of heavily galvanized iron, and the angle-iron supports for the dividing wires. Not a nail or a screw is used in the manufacture of this tough crate. All the wires extend clear through the wood slats and the corner irons are riveted, inside to outside. One of the most important features of this Case is the construction of the bottom runners. The runner is dovetailed into the bottom slat and is further held in place by the corner irons.

12-qt. case.....\$2 25	20 half-pt. case.....\$2 25
20-pt. case..... 2 25	30 half-pt. case..... 2 40
25 Cases or more, 15 cts. per Case less.	



STEWART NO. 9 HAND-POWER SHEARING MACHINE

For shearing sheep and goats. Gears cut from solid steel, enclosed, and run in bath of oil. Joints of drop-steel forging, fitted with steel ball-bearings. Shearing handpiece is the light-running, ball-bearing Stewart No. 7. Easy to turn, shears fast, and is built to last a lifetime. Is supplied complete with 2 combs and 4 cutters. \$24.

STEWART NO. 10 HAND-POWER CLIPPING MACHINE

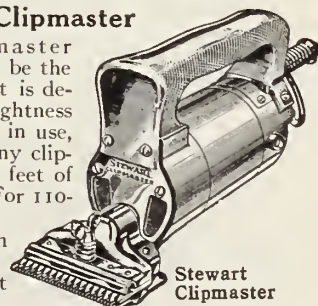
For clipping cows, horses, mules, and dogs. Ball-bearings scientifically fitted make it the easiest-turning hand-power Clipping Machine made. Equipped with Stewart B-1 head, 6 ft., flexible shaft and chain. (Not illustrated.) \$15.

Stewart Clipmaster

The Clipmaster has proved to be the fastest Clipper ever invented. It is designed with a view to extreme lightness in weight and great convenience in use, maintaining perfect balance in any clipping position. Equipped with 25 feet of rubber-covered extension cord. For 110-volt current.

Model J1, with built-on aluminum handle as illustrated, \$19.50.

Model J2, with strap handle (not illustrated), \$18.50.



Sealright Standard Bottle Caps

Made from the Famous Fulton Board



These Caps are made from the very best grade of 35-point spruce-sulphite pulp board and are odorless and tasteless. A pure white paraffin is used for waterproofing them. The ink used for printing is especially manufactured for this purpose and will not spread or fade if bottles are submerged in water. These Caps work perfectly in capping machines.

PRICES

No. 2 size. Packed in tubes, 500 caps each

Stock printing.	Postpaid	
500 caps...\$0 35	\$0 45	25,000 caps.....\$10 00
1,000 caps... 65	75	50,000 caps..... 18 00
5,000 caps... 2 75	2 95	

Printed to order, type design, any one color.

	Electro Charge		Electro Charge
5,000 caps...\$3 50	\$3 50*	25,000 caps...\$10 50	\$2 00*
10,000 caps... 5 50	2 50*	50,000 caps... 19 50	1 25*

*This charge applies on first order. No electro charge on future orders printed from same electro.

Caps printed to order are shipped direct from factory and transportation charges prepaid at prices quoted.

Can furnish caps 40-point thickness at 2 cts. per 1,000 additional.

Sealright Liftright Bottle Caps

Made from the Famous Fulton Board



The Liftright Cap requires no opener—lift-tab is part of the Cap. It has a patented groove at tip of lift-tab which makes it accessible for easy lifting. Lift-tab is strong and tough and slightly stripped at free end, making it easy to pull up, leaving all but tip of lift intact and not affected by moisture. Cap is thoroughly waxed with paraffin; waxing in groove prevents moisture penetration. Has strong wire staple at base of tab which assures positive leverage and prevents tearing.

All through the process of manufacture—quality is the keynote. Sealright Milk Bottle Caps are printed clear and sharp; they have clean, square-cut edges and exact diameters. They are made to live up to the high standard expected from the name "Sealright."

Liftright Caps will work perfectly in capping machines after they have been properly adjusted for handling this cap. Information and instruction regarding adjustment furnished on request.

Made of 40-point board only.

PRICES

No. 2 size. Packed in tubes, 500 caps each

Stock printing.	Postpaid	
500 caps...\$0 40	\$0 50	25,000 caps.....\$12 50
1,000 caps... 75	85	50,000 caps..... 22 50
5,000 caps... 3 25	3 50	

Printed to order, type design, any one color.

	Electro Charge		Electro Charge
5,000 caps...\$4 20	\$3 50*	25,000 caps...\$13 25	\$2 00*
10,000 caps... 6 80	2 50*	50,000 caps... 24 00	1 25*

*This charge applies on first order. No electro charge on future orders printed from same electro.

Caps printed to order are shipped direct from factory and transportation charges prepaid at prices quoted.

Milk and Cream Scale

"Weigh the Milk"

Do you know what your milk costs? Do you know which are your profitable cows? And which, if any, are unprofitable? It is of vital importance to every producer that the cost of the product be accurately known, whether that product be milk or cream, butter, bread, nails or shoes. It costs as much to keep a poor cow as it does to keep a good one. The quantity and quality of milk and cream produced show which are good and which are poor cows. Weigh the milk from each cow, so you can know which are your profitable and which, if any, are your unprofitable cows.

These scales are made with adjustable (Red) pointer to take up tare of pail or can.

Directions.—Hang the pail or can on the hook, and adjust red pointer to zero. Then pour in the milk, and the red pointer will indicate exact weight of milk alone. Black pointer indicates weight of milk and pail or can. Milk-record blank packed with each scale.

30-lb. Scale. Weighs by 1/20 lb., price, \$7.25; postpaid, \$7.40.

60-lb. Scale. Weighs by 1/10 or 1/20 lb., price, \$8.75; postpaid \$8.90.

120-lb. Scale. Weighs by 1/10 or 1/20 lb., price, \$13; postpaid, \$13.15.

These same Scales can be furnished to weigh by ounces at the same prices

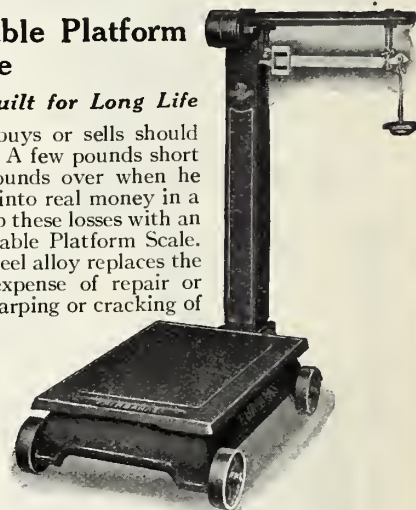


Fairbanks Portable Platform Scale

An All-metal Scale Built for Long Life

Everything a farmer buys or sells should pass over his own Scale. A few pounds short when he buys; a few pounds over when he sells—these losses count into real money in a year's time. You can stop these losses with an all-metal Fairbanks Portable Platform Scale.

In this Scale, copper-steel alloy replaces the wood, eliminating the expense of repair or replacement caused by warping or cracking of wood, and forming the most rigid Scale ever offered. All counterpoise weights, stem and cup, bearings, etc., are rust-proofed by the Parkerizing process, which assures accuracy throughout a long life of severe service.



No. 1128. Capacity 500 lbs.....\$18 00

No. 1124. Capacity 1,000 lbs..... 21 00

Blatchford's Calf Meal

Blatchford's Calf Meal is absolutely the only milk-substitute which contains all the elements the calf requires for rapid and healthy growth.

It is the only Calf Meal that is thoroughly cooked and prepared for digestion. It is easy to feed. Calves relish it.

It supplies in easily assimilated form all the food elements necessary for rapid growth, early maturity, thrift and health.

Stock Feeds

We make a specialty of supplying our customers with high-grade stock feeds and concentrates. Following is a partial list:

Buffalo Gluten Feed	Whole Flaxseed
Digester Tankage	Cotton Seed Meal
Oil Meal, Old Process	Blatchford's Calf Meal
Flaxseed Meal	Alfalfa Meal

For prices on above feeds see our monthly feed price-list accompanying this catalogue.

Osborn Brushes for the Dairy Hand Bottle Brushes



No. 86. Stiff bristle; $2\frac{3}{4}$ -inch diameter; handle 9 in. long; wire-wound. 65 cts., postpaid 70 cts.; doz. \$7.



No. 72 45 cts., postpaid 50 cts.; doz. \$5.



No. 124. 60 cts., postpaid 65 cts.; doz. \$6.50



For Machine Washer

No. 125. Turbine. 55 cts, postpaid 60 cts.; doz \$6.



No. 100. Center Brush for cleaning outside of bottles. 85 cts., postpaid 90 cts.

No. 101. Outside Brushes for cleaning inside of bottles. 60 cts., postpaid 65 cts.

Complete Set of 3 brushes, \$1.90, postpaid \$2.05.



Palmetto Milk Can Brush

No. 08. Palmetto fibre; width of face 5 in., length of face 10 in.; solid block. Made of an excellent grade of durable fibre, very full, with flaring wings.

45 cts., postpaid 55 cts.; doz. \$4.85.



Genuine African Bass Stable Broom

No. 286D. Solid block; length of stock $5\frac{1}{4}$ in., clear; 4 rows, 14 in. long; complete with handle. \$1, postpaid \$1.25.



No. 500 Stable Broom

No. 500. Solid block; length of stock 6 in. clear; 5 rows, 16 in. long; complete with handle. \$1.35, postpaid \$1.60.



Paterson Genuine Vegetable Parchment

It is insoluble, having no taste or odor, and is moisture-proof and grease-proof. The nationally advertised wrapper for butter, cheese, lard, smoked, salt or fresh meats, fish and other food-products.

8 x 11 in. 9 x 12 in.

1,000-sheet boxes, plain, no printing,.....	\$2 00	\$2 25
1,000-sheet boxes, printed "1 lb. net".....		3 25
250-sheet boxes, plain, no printing.....	60	65
250-sheet boxes, printed "1 lb. net".....		1 25

Postage extra, 250-sheet box, 5 cts.; 1,000-sheet box, 15 cts.

Pittsburgh Butter Mould

It is a very convenient shape and makes a nice-looking print, desirable for the market, and is being adopted in other sections of the country by butter-makers and packers for shipping purposes.

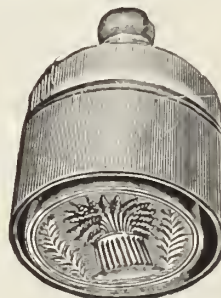


PRICES

Each Postpaid

$\frac{1}{2}$ -lb. prints, $3\frac{5}{8} \times 2\frac{1}{4} \times 1\frac{7}{8}$ in.....	\$2 00	\$2 15
1-lb. prints, $4\frac{3}{4} \times 2\frac{1}{2} \times 2\frac{1}{2}$ in.....	2 50	2 65

Block carved with sheaf of wheat design, \$1 additional.



Round Butter Moulds

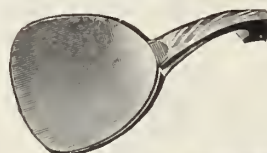
These Moulds are made of the finest selected sugar maple, thoroughly seasoned, hand carved, and are a strictly first-class Mould. Made in 1-pound size.

No. 1. Sheaf Design. 50 cts., postpaid 60 cts.

No. 2. Cow Design. Our new "Jersey Cow" Mould is a very handsome design and is an artistic piece of carving. 50 cts., postpaid 60 cts.

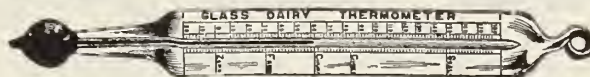
Hardwood Butter Bowls

Made from selected Michigan hardwood; paraffin wax finish. Extra deep; heavy rimmed. 15-in. \$1.10, 17-in. \$1.65, 19-in. \$1.95.



Anderson Butter Ladle

Made from white sugar maple. 20 cts., postpaid 25 cts.



Churn Thermometer

Glass cylinder; mercury-filled tube; accurate, within one division of the scale; 8 inches long. 50 cts., postpaid 65 cts.

Perfection Anti-Cow Kicker

The grapple or hook parts are made from a special size round steel, so shaped and arranged to prevent torturing or injuring the animal's legs. An extra-heavy strong webbing comes in front of the legs, thus acting as a pad, absolutely preventing cutting, injuring, or bruising the fleshy parts, such as produced by chain links, which often gall, bruise, or injure the sides and front of legs. \$1, postpaid.

Security Milk Cans



OHIO PATTERN

Made of Follansbee forge steel with an extra-heavy coating of pure tin. Welded side seam. Neck Each Doz.

5-gal., 6 $\frac{3}{8}$ -in..	\$3 20	\$36 00
8-gal., 7 $\frac{1}{4}$ -in..	3 80	42 75
10-gal., 7 $\frac{1}{4}$ -in..	4 05	45 50

Umbrella Cover for Ohio pattern in place of Sunken Cover, add 15 cts. per can. **Half-Dozen Cans at Dozen Rate.**

ST. JOHN PATTERN

Heavily constructed. Seamless drawn neck and breast. One-piece upright handle.

	Each	
1-gal.....	\$2 50	
2-gal.....	2 75	
2 $\frac{1}{2}$ -gal.....	3 25	
3-gal.....	3 50	

Name-Plates for Milk Cans

Brass Name-Plates soldered on can, limit three lines, twenty letters per line, 15 cts. each; doz. or more, \$1.50 per doz.



Thatcher Superior Quality Milk Bottles

"A bottle of milk is a bottle of health"

All bottles and capacity guaranteed to conform with state laws

Thatcher Quality Milk Bottles are made in different shapes, S, G, and H. We recommend the Style S which shows deep cream line.

	Doz.	$\frac{1}{2}$ gross	Gross
Quarts.....	\$0 85	\$4 00	\$7 30
Pints.....	70	3 25	5 65
Half-Pints.....	60	2 70	4 65
Quarter-Pints.....	60	2 70	4 65

Five-gross lots, 25 cts. per gross, 10-gross lots 50 cts. per gross, and 25-gross lots 75 cts. per gross less than above prices.

Name-Plates \$2.50 for each size. Plates free on orders for 5 gross of one size.

Orders for lettered Bottles must be for one gross or more of each size. All lettered Bottles f.o.b. factory, with freight allowance of 50 cts. per gross. Plain Bottles f.o.b. cars, Pittsburgh.

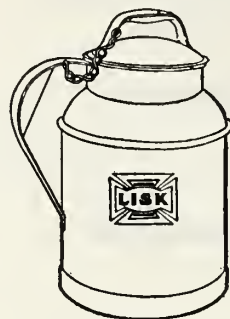


Perfection Milk Bottle Basket

Perfection Baskets are made up of plain annealed bands. They have extra-heavy top and handle, made to last a lifetime.

	Each	Postpaid	Doz.
6-quart....	\$1 40	\$1 50	\$15 00
8-quart....	1 50	1 60	16 00

Lisk Milk Cans



P-24



P-23

Made from finest charcoal plate; seamless cover and neck. Bottom reinforced with steel band. Heavy steel bail. Sanitary soldered. Full capacity.

	Each	Postpaid	Doz.
P-2304. Capacity 1 gallon.....	\$1 25	\$1 40	\$13 50
P-2306. Capacity 1 $\frac{1}{2}$ gallons.....	1 50	1 65	16 25
P-2308. Capacity 2 gallons.....	1 85	2 05	20 00
P-2312. Capacity 3 gallons.....	2 50	2 70	27 00
P-2404. Capacity 1 gallon.....	1 25	1 40	13 50
P-2408. Capacity 2 gallons.....	1 85	2 05	20 00
P-2412. Capacity 3 gallons.....	2 50	2 70	27 00

Half-Dozen Cans at Dozen Rate

Milk Strainers

No. 1934. Made seamless—No. 1934

body and foot drawn of one piece of metal. Wire cloth soldered on bottom and equipped with sturdy wire foot or band, to be used as a foot when straining into a pan, or as a band to hold cloth when straining into a can. The brass wire cloth on bottom can be easily replaced. Sanitary and easy to clean. Capacity 4 quarts. \$1, postpaid \$1.15.



P19512. The most popular Strainer on the market. Seamless and sanitary soldered. Furnished with bottom cut out and equipped with removable flat perforated tin disc, convex perforated tin disc, and spring wire. Cotton pads are used between the discs and are furnished at extra charge. Capacity 12 quarts. \$1.50, postpaid \$1.75.



No. P19512

Cotton Discs. 6-in. diameter. Plain Discs, package of 100, 40 cts., postpaid 50 cts.; package of 300, \$1, postpaid \$1.15. Thread-faced Discs. Package of 100, 60 cts., postpaid 70 cts.; package of 300, \$1.60, postpaid \$1.75.

Savory Dairy Pails

	Each
No. 1010. 10-qt., plain bail....	\$0 60
No. 1012. 12-qt., plain bail....	65
No. 1014. 14-qt., plain bail....	75
No. 1012. 12-qt., plain bail, sanitary solder.....	90
No. 1014. 14-qt., plain bail, sanitary solder.....	1 00
No. 812. Strainer Pail. Wire bail with wood roll, \$1.65.	

The Sanitary Solder Pails are the same design as the No. 10 series but the outside seams are soldered in addition to the regular soldering of seams that is done on all Dairy Pails, which makes the Pail strictly sanitary.



Pilling Hard-Rubber Teat Plug

The Pilling Hard-Rubber Teat Plug is especially designed to prevent dropping of milk in cows where there is a relaxation of the little muscle at the end of the teat and consequent leakage of milk as soon as enough pressure accumulates in the udder; also to dilate the canal of the teat above the muscle in cases where hard milking is due to contraction of this part of the canal. 65 cts. postpaid.

Pilling Teat Expander

The Pilling Teat Expander, of metal, nickel plated, is intended to expand and enlarge the opening of hard-milking teats. It also expands the milk canal at the same time. Easy to use. 60 cts. postpaid.

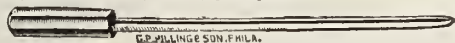


Pilling Milking Tubes

For sore and obstructed teats and hard-milking cows. Can be made any length by moving the adjustable slide; can also be used for a probe to pass the obstruction. 2 1/4-inch 65 cts., 2 3/4-inch 80 cts., 3 1/4-inch 95 cts., 3 3/4-inch \$1.10, 4 1/4-inch \$1.25 postpaid.

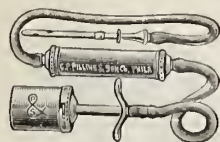
Medicated Wax Teat Dilators

First open teat with a metal dilator, probe or milk tube, then keep a Wax Dilator in teat between milkings. 25 cts. per pkg. of 18, postpaid; \$1 for 7 doz., postpaid.



Pilling Teat Opener

The Pilling Teat Opener differs from the Bistoury inasmuch as the Opener is simply used as a reamer or dilator to pass the obstruction. It does not cut the obstruction as the Bistoury does. \$1 postpaid.



Pilling Milk Fever Outfit

Made according to specifications of the U. S. Department of Agriculture, except it is made with patented metal pump instead of rubber bulb. Price with metal pump and regulator tube, \$3.50.

Prices on other Pilling Cattle Instruments on request. Send for booklet.



"Kant Suk" Calf and Cow Weaner

Being made with a hinge joint, it swings out of the way when the calf eats or drinks, but effectually prevents sucking. It is heavily tinned, sanitary, and humane.

	Postpaid
No. 1055. Calf size..	\$0 50 \$0 55
No. 1055 1/2. Yearling size.....	60 65
No. 1056. Cow size..	65 70

Common-Sense Calf-Feeder

The Common-Sense Calf-Feeder is a simple, practical device which every calf-owner will appreciate. The calf sucks his food in a natural manner, and the milk is taken into the stomach without having it form a solid, cheese-like, indigestible lump, which is frequently the case where the calf drinks directly from the pail.



	Postpaid
Single Feeder.....	\$2 00 \$2 15
Double Feeder.....	3 00 3 15

The Improved Keystone Dehorner



The Improved Keystone Dehorner is the latest and most efficient Dehorning knife on the market today. It has been altered and improved in several important points of construction, until its strength, cutting service and durability have been greatly increased.

The entire instrument is lighter, stronger, and better proportioned than former Dehorning knives. We guarantee it to be a first-class device in every way. Complete with leader, rope, extra set of blades and screws, \$18; postpaid \$18.50.

Special Circular Sent on Request



Safety Bull Staff

Constructed of 1 1/8-inch O. D. extra-heavy steel pipe with malleable lock-hook. Can be operated from two places. To hook the nose-ring into the Staff, pull on the slide-ring near the head of Staff; to release, pull on the snap-ring in handle of the Staff. Length 4 ft. 9 in. Weight 8 lbs. \$3.60, postpaid \$3.75.

"Pierceasy" Bull Ring

This is "the Ring with a point." It is made of bronze, cuts a clean hole, and is superior to the ordinary Ring.

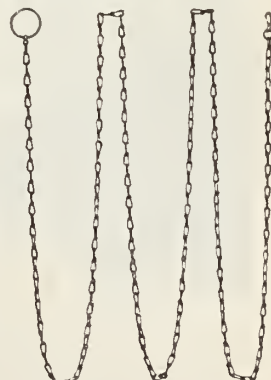
	Postpaid
No. 1. 2 3/4 x 5/16 in..	\$1 00 \$1 10
No. 2. 2 7/8 x 3/8 in..	1 50 1 60
No. 3. 3 1/4 x 7/16 in..	1 75 1 85



"Bullchane" Pacifier

If you own a bull that's at all hard to handle, you need Wagner's "Bullchane" Pacifier. Subdues most vicious animal without any harmful effects whatsoever.

Cannot twist because it has swivels every 2 feet. Snaps in nose ring and makes finest kind of "hitch" or leader. Strong and long-wearing—and just heavy enough to effectually "tame" the ugliest animal. A boon to stock raisers. \$2.25, ppd. \$2.35.



Tie-Out Chain

Our Tie-Outs are all made with large swivel malleable iron stake ring, swiveling snap, and a swivel in the center.

20-ft. Chain, 65 cts.; postpaid, 75 cts.; 30-ft., \$1; postpaid, \$1.10.

Each Tie-Out Chain is packed in a neat and substantial bag.

Cow Ties

For stable use. Well made with two toggles. 35 cts. each, postpaid 40 cts.

Ney Dairy Barn Equipment

Ney No. 1 Stanchion

Unquestionably the best Stanchion ever placed on the market. Made without springs, the folding, over-center toggle locks it securely when closed and ties it together at the top when open. Frame high carbon T-bar steel with seasoned hardwood lining. Other parts malleable iron, connecting links of steel. Width adjustable, 7 to 8½ inches.

Less than 1 dozen, \$4 each; 1 doz. and upward, \$3.75 each.

Ney No. 5 Stanchion

In general somewhat similar to the No. 1, but lighter, non-adjustable in width, and has no malleable iron parts. Frame U-bar, lined with hardwood. Strong and practical and a good low-priced Stanchion. (Not illustrated.)

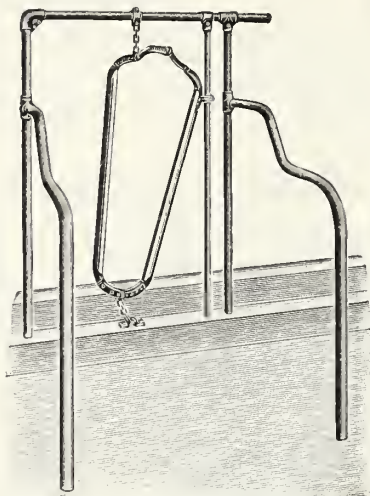
Less than 1 doz., \$2.55 each; 1 doz. and upward, \$2.40 each.



Ney No. 40 Stall

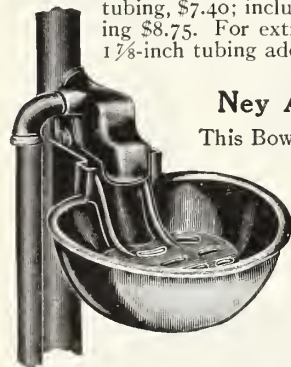
Built entirely of high quality stiff steel pipe or tubing either 1½ in. or 1⅞ in. O.D. Bottom Anchor is of ⅞ in. galvanized "U" bolt with removable clamp; top rail shipped in sections of two to three stalls with all fittings on; "T" fittings attached to posts to receive stall partitions. Clamps and all parts are of steel and certified malleable iron; finished in special gray enamel.

In using No. 1 or 5 stanchion, No. 40 will appear exactly as illustrated with an extra 1¼ in. filler, making a two post center all the way through. Price, including No. 5 stanchion, 1½-inch tubing, \$7.40; including No. 1 stanchion, 1½-inch tubing \$8.75. For extra End Section \$2.50. For stalls of 1⅞-inch tubing add 42 cts. to these prices.



Ney No. 11 Stall

An especially attractive construction embracing every feature of known advantage. Two posts cross braced. Rigid top rail. Built of either 1⅞ or 1½-inch O. D. steel tubing and steel "T" fittings. Standard width 42 inches; can be varied to suit. Price, including No. 1 Stanchion, 1½-inch tubing, \$10.85; 1⅞-inch tubing \$11.50. Extra End Sections \$2.90.

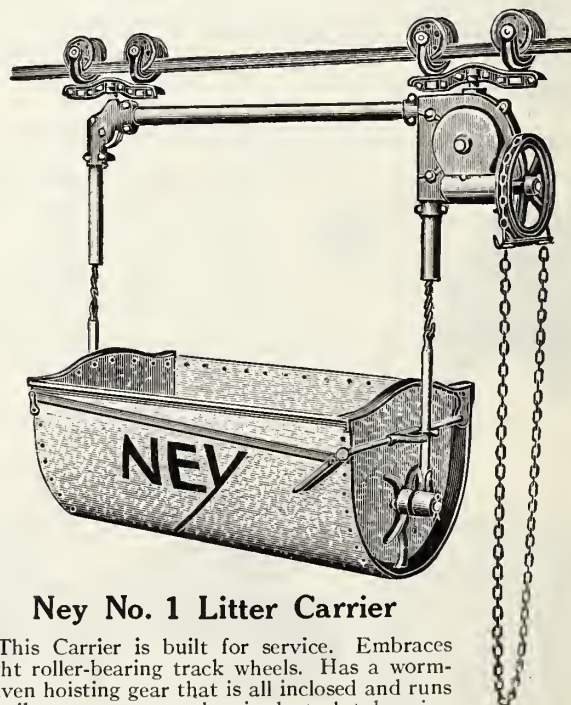


Ney Automatic Water Bowls

This Bowl is absolutely sanitary, 10 inches in diameter, smooth and round, with no corners to collect dirt. It is equipped with the hinged, dropped-clean feature and small automatic latch by which the Bowl can be dropped instantly for cleaning and raised to a normal position just as easily. All working parts of solid brass including cage.

No. 1. Price \$4 each; 6 to 12, \$3.85 each; 12 or more, \$3.75 each.

No. 2. Same as No. 1, except has cast-iron valve seat. \$3.25 each; 6 to 12, \$3.10 each; 12 or more, \$2.95 each.



Ney No. 1 Litter Carrier

This Carrier is built for service. Embraces eight roller-bearing track wheels. Has a worm-driven hoisting gear that is all inclosed and runs in oil, extra-strong galvanized steel tub using heavy malleable angles at ends and extra-large bearings. Price, with 8 to 10-bus. Tub, \$47.50; with 10 to 12-bus. Tub, \$49.50. Ask for complete catalogue and prices on track and fixtures for Litter Carrier.

Ask for complete catalogue of Ney Barn Equipment, showing other styles of Stanchions and Stalls, Stall accessories, Litter Carriers, Bull-Pens, and other equipment.

"O & S" Vertical Boilers

Ideal for the dairyman or farmer, and for use wherever steam is required. We have a size that meets every requirement.

"O & S" Boilers have stood the test for nearly half a century. In construction and in operation their superiority has been acknowledged by users throughout the world. The steel plate used in these boilers is firebox quality, containing a sufficient quantity of copper to insure minimum corrosion.

SPECIFICATIONS AND F.O.B. FACTORY PRICES

H. P.	Number of tubes	Length of tubes	Height of boiler	Diameter of boiler	Price
1 1/2	16	18 in.	3 ft.	20 in.	\$120 00
2	19	24 in.	3 1/2 ft.	20 in.	125 00
3	19	30 in.	4 ft.	20 in.	130 00
4	24	25 in.	4 ft.	24 in.	165 00
5	24	37 in.	5 ft.	24 in.	175 00
6	24	49 in.	6 ft.	24 in.	185 00
8	48	34 in.	5 ft.	30 in.	235 00
10	48	46 in.	6 ft.	30 in.	250 00

Thickness of shell, 1/4 in.; thickness of head, 3/8 in.; thickness of furnace-plate, 1/2 in.; full-length tubes all 2 inches diameter. Manufactured in accordance with A. S. M. E. specifications.

Equipment: Bare boiler, base, grates, cone-hood, steam-gauge, water-gauge, gauge-cocks, pop safety-valve, blow-off valve, check-valve, stop-cock, and injector fitted to boiler.

Price and circular of other size Boilers on request. Can also furnish tubeless Boilers in sizes from 3 H.P. to 25 H.P. Prices and circulars on request.



"Farmer's Favorite" Boiler and Sterilizer

For Sugar-Makers, Butchers, Dairymen, and Fruit-Growers

One of the handiest agricultural Boilers and Cookers on the market today. It can be used for a great variety of purposes, such as cooking feed, heating water, rendering lard, scalding hogs, boiling spraying mixture, etc.

Top section, or boiler, is made of heavy galvanized steel, which fits securely into lower section, or furnace. The furnace is made with cast-iron ends and the center, or body, of heavy steel plate. The firebox is the length of the Cooker. A top plate can be furnished at a small cost, and when used in place of the Boiler it converts the Cooker into a first-class room-heater. It may be used indoors as well as outdoors. It is well constructed and inexpensive.

No. 2, 30 gals., \$16; No. 3, 40 gals., \$18; No. 4, 50 gals., \$20; No. 6, 100 gals., \$25

Prices f.o.b. factory. Faucet to draw off liquid, attached, extra \$1.50. One length of 6-in. stove-pipe and elbow included with Cooker



Perfection Funnel Filler

Conforms with Sanitary Law Requirements

The dairyman who bottles from 50 to 200 bottles of milk, cream, or buttermilk daily will find this Filler a saver of time, labor, and money. It is made of heavy cold rolled copper, tinned on both sides, and all seams are soldered smoothly and corners rounded.

These Fillers are fitted with cap seat sealing valve. All parts are brass, nickel-plated, and polished. The rubber ring is made to fit exactly on the cap seat, so that the rubber does not come in contact with the milk. The valve is designed to fill the bottles uniformly to within 1/8 of an inch from the cap.

They work on any size bottle and are well constructed, dependable, easily operated, and easily cleaned.

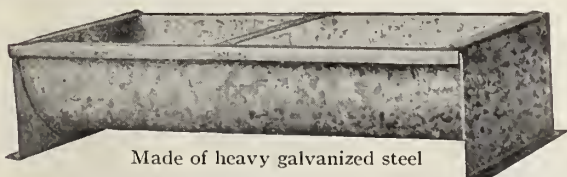
8-quart capacity... \$12 00
14-quart capacity... 16 00 16 25

Stand for either size, if wanted, extra... 2 00 2 15

Circular and prices of larger size Fillers on request.



Superior Hog Trough



Made of heavy galvanized steel

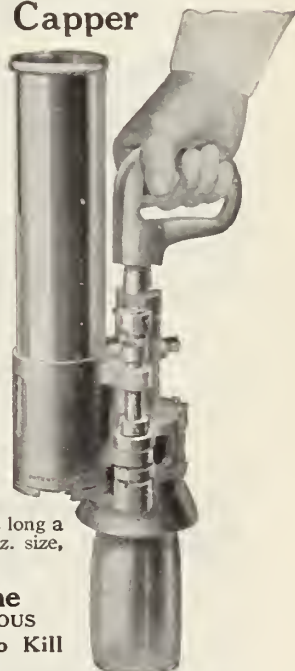
	Each	Doz.		Each	Doz.
2-foot.....	\$0 75	\$8 00	6-foot.....	\$1 75	\$19 00
4-foot.....	1 35	14 50	8-foot.....	2 25	24 00

Rotary Hand Bottle Capper

SANITARY—SIMPLE—FAST

If you are selling bottled milk, you cannot afford to be without one of these improved Cappers. It is faster and more sanitary than the old-fashioned "thumb and finger" method. Easy to operate; nothing to get out of order; always ready for immediate use. Conforms with all sanitary law requirements. Uses No. 2 standard bottle caps.

All working parts are case hardened and work on ball bearings. Extremely simple to clean. Weighs 5 3/4 pounds. Price \$24.75, postpaid \$24.90.



K-R-O KILLS RATS WITHOUT DANGER

K-R-O cannot kill live stock, pets, or poultry, yet is guaranteed to kill rats and mice every time.

Use K-R-O freely around the poultry-yard without danger to your flocks. Severest experiments have proved it safe. Chickens have been fed a steady diet of food containing 10 per cent K-R-O for as long a period as six weeks without injury. 2-oz. size, 75 cts.; 4-oz. size, \$1.25, postpaid.

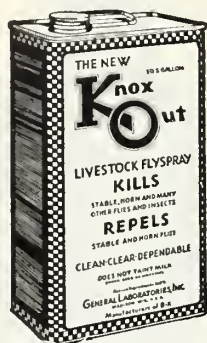
Pastoxine
NON-POISONOUS
Guaranteed to Kill
Rats

Is absolutely harmless to human beings, domestic animals, and poultry.

As little as 2 grains will kill a rat in from two to six hours, and it will go out in the open to die, thus eliminating all odors.

Pastoxine is approved by boards of health of leading cities and by the U. S. Department of Agriculture as not a misbrand. 1-oz. jar, 50 cts., postpaid.





The New Knox-Out KILLS AND REPELS FLIES

Has a pleasant odor—does not stain—does not taint milk—and will not blister when used as directed.

K-O sprayed on cattle kills flies with which it comes in contact and builds up a protective film on the hair which repels flies and keeps them from annoying cattle in the pasture. Postpaid

1-qt. can.....	\$0 60	\$0 75
1-gal. can.....	1 50	1 80
5-gal. can.....	6 75	
30-gal. drum.....	35 00	

In Dairies and Milk Plants

Kills Flies

CLEAN

CLEAR

Mild, pleasant odor that disappears quickly after use.

Does not taint food when used as directed.

		Postpaid
1/2-pt. can.....	\$0 35	\$0 45
1-pt. can.....	65	75
1-qt. can.....	1 00	1 15
1-gal. can.....	3 50	3 80
5-gal. can.....	15 00	



Old Hickory Smoked Salt

(PLAIN OR SUGAR CURED)



Each Sugar Cure drum contains a perfect blend of the original and genuine Old Hickory Smoked Salt and sugar-curing ingredients sufficient to sugar-cure and smoke 110 pounds of meat without the use of a smokehouse. A simple operation: rub it on the meat. No meat lost from shrink in the smokehouse or spoiling due to warm days.

The regular Old Hickory Smoked Salt drums contain sufficient Smoked Salt to which you will add your own sugar-curing ingredients, to salt and smoke 133 pounds of

meat (the dressed meat of a 225-pound hog). No smokehouse necessary. Directions in each package. Either Old Hickory Smoked Salt in 10-lb. drum or Old Hickory Sugar Cure in 9-lb. drum, \$1 each, postpaid \$1.20.



Sal-Vet (MEDICATED SALT)

This is composed of sulphate of iron, sulphur, quassia, gentian, carbonized peat, charcoal, epsom salts, and tobacco coated on grains of salt, by a special process. Salt provides the "voluntary feeding principles." Farmers should salt their stock with Sal-Vet, thus giving them the medication to keep out worms, strengthen digestion, and make more profit out of their feed. It is sold on a positive guarantee. A hundred testimonials right from his own neighborhood will be mailed to any farmer on his application.

	Postpaid	
10-lb. pkg.....	\$1 00	50-lb. pail.....\$4 00
25-lb. pkg.....	2 25	100-lb. bag..... 6 75



Sterilizer Deodorant Disinfectant

Sterilizes Milk Utensils and Equipment

Easy and inexpensive to use—no extra equipment. Dilute with water according to directions.

FREE BULLETINS ON ALL USES

Sold on Money-Back Guarantee

WE RECOMMEND IT

	PRICES	Postpaid
4-oz. bottle.....	\$0 30	\$0 40
10-oz. bottle.....	50	60
1-qt. bottle.....	90	1 05
1-gal. jug.....	2 00	
5-gal. jug.....	8 50	

Udder Help

A highly antiseptic, healing ointment preferred by dairymen for "caked" bag, sore, chapped teats.

	PRICES	Postpaid
1/2-lb. can.....	\$0 50	\$0 60
1-lb. can.....	90	1 00
5-lb. pail.....	4 25	4 45



Conkey's Fly Knocker

Every stockman, every dairyman needs Fly Knocker. Don't let flies torment your horses; don't let them worry your cows. Cows give more milk and butter-fat and horses work easier when you save their energy by keeping off those winged pests.

	Postpaid		Postpaid
Quart.....	\$0 60	Gallon.....	\$1 50
2 quarts.....	90	5 gallons.....	7 25



Wyandotte Cleaner and Cleanser is used by 85 per cent of the butter- and cheese-makers in the United States and Canada. To this large number can be added thousands of farmers, dairymen, and milk-dealers who are steady patrons.

It contains no soapy grease, makes no soapy suds, nor resembles soap agents in any way. It is an efficient but harmless cleaner made purposely for washing milk utensils and containers.

	PRICES	Postpaid
5-lb. sack.....	\$0 45	\$0 60
80-lb. keg (bulk).....	4 90	
280-lb. bbl. (bulk).....	13 50	

Cows' Relief

Cows' Relief is one of the greatest remedies ever compounded for cattle and is worth its weight in gold to the farmer or dairyman, as it is a specific remedy for caked bag and all teat troubles.

	PRICES
Small size. 50 cts., postpaid 55 cts.	
Large size. \$1, postpaid \$1.10.	



Kow-Kare

The great cow medicine for abortion, barrenness, scouring, bunches on the udder, red water, and "off feed." Kow-Kare assists nature, makes pure blood, corrects stomach disorders, improves appetite, and being a safe and powerful tonic, makes a larger flow of milk.

PRICES

	Postpaid
Small Size.....	\$0 65
Large Size.....	1 25
Half-do. Large Size for \$6.25.	

Bag Balm

We recommend Bag Balm for all diseases of udder and teats, caked bag, sore teats, bunches, chapping, cuts, inflammation, etc. It makes easy milkers of hard ones and keeps all the parts in a sanitary, healthful condition. 60 cts., postpaid, 70 cts.

O. H. Cow Tone

The result of years of experiment, research and study. It is to be used in cases of abortion, barrenness, retained afterbirth, red water, garget, dysentery, bloat, or hoven. In the treatment of such cases it has no equal in the world and you should keep it on hand and use it as directed. Cow Tone stimulates the processes of digestion and elimination establishes the health and tone of the animal so that a noticeable increase in the flow of milk follows its use on cows that are confined in stables during the winter.

	Postpaid
Small Size.....	\$0 50 \$0 60
Large Size.....	1 00 1 15

Calves' Cordial

One of the best remedies ever prepared for the treatment of scours in calves and cows, also a valuable remedy for stomach and bowel disorders. It acts as an astringent upon the digestive tract, soothing the inflamed tissues and removing the fevered condition. Large size 50 cts., postpaid 55 cts.

Blackman's Medicated Lick-A-Brick

The Original Medicated Salt Brick

Blackman's aids digestion; removes worms; purifies the blood; cures skin diseases, kidney, stomach and bowel trouble; prevents colic; creates a healthy appetite; tones up the system; removes old coat of hair and brings out the new.

Blackman's Medicated Salt Brick contains absolutely nothing but dairy salt mixed with sulphur for a blood purifier, copperas for worms and the bowels, saltpeter for the kidneys, and nux vomica, one of the best known tonics.

25c. per Brick, postpaid 30c.; doz. Bricks \$2.75
2 doz. Bricks \$5.25

Keystone Pure Salt Bricks

Stimulates Cow's Digestive System

Practical dairymen and live-stock feeders know that live stock like and want salt. A cow will be more thrifty and more healthy if she has the proper amount of salt in her ration.

Keystone Pure Salt Bricks, in the patent feeder built especially for them, placed where the live stock can have access to them, will let them take salt as they want it. These Bricks are of pure, unadulterated salt. 25 cts. per Brick, postpaid 30 cts.; doz. Bricks \$2.75; 2 doz. Bricks \$5.25. Patent Feeder, 40 cts. each, postpaid 45 cts.



**PROVED BY THIRTY
YEARS' EXPERIENCE**

For Cow Health in Calving

KOW-KARE daily with the feed, two weeks before and two weeks after, works wonders, costs little, and earns big profits in the health and strength of cow and calf and full milk production. Many dairymen feed it for a week every month to prevent disease and insure top-notch milk yield.

BAG BALM, made by KOW-KARE people is wonderful for Caked Bag, Sore Teats, Cuts, etc. Try this healing ointment.



Write for "The Home
Cow Doctor". . . Free

Corona Wool Fat Compound

For Scalds, Burns, Cuts, Wounds, Cracked and Chapped Hands, Frosted Feet, White Diarrhea of Baby Chicks, Caked Udders, Sore Teats, Sore Shoulders, Cuts and Scratches, Cracked Hoofs. Keep a can in the house and barn. Use it for any sore or wound on man or beast, and you will find it "worth its weight in gold." 5-oz. tube 50 cts., postpaid 55 cts.; 8-oz. can 65 cts., postpaid 70 cts.; 20-oz. can \$1.25, postpaid \$1.35.



Dr. Hess Improved Stock Tonic

A summary of many comparative tests, covering three years, shows that cows receiving Dr. Hess Improved Stock Tonic produce, on the average, 54.9 per cent more profit than cows not getting the Tonic.

The Tonic has been recently improved in keeping with latest scientific discoveries and feeding practices. All the minerals proved necessary to the heavy producing dairy cow have been added. This conditioner and mineral supplement whets the appetite, sustains the milk-flow well through the lactation period, and is a valuable aid in calving.

	Postpaid	Postpaid
5-lb. pkg.	\$0 75 \$0 90	25-lb. pkg. \$3 00 \$3 35
15-lb. pkg.	2 00 2 25	100-lb. drum. .10 00

Pratt's Animal Regulator

A tonic for Horses, Cattle, Sheep, and Hogs. Pkgs. 25 cts., postpaid 30 cts.; 50 cts., postpaid 60 cts.; \$1, postpaid \$1.20; 25-lb. pail \$3.40, postpaid \$3.80.

Pratt's Cow Tonic

A regulator and medicinal tonic. Pkgs. 50 cts., postpaid 60c.; \$1, postpaid \$1.20; 25-lb. pail \$4.50, postpaid \$4.90.

Pratt's Hog Tonic

A digestive tonic, bowel regulator, worm-expeller, and fattener. Pkgs. 50 cts., postpaid 55 cts.; \$1, postpaid \$1.10.

Retsof Rock Salt

The genuine Retsof Rock Salt in lumps weighing from 5 to 15 pounds each. 50 lbs. \$1.25, 100 lbs. \$2.25, 280 lbs. \$5.

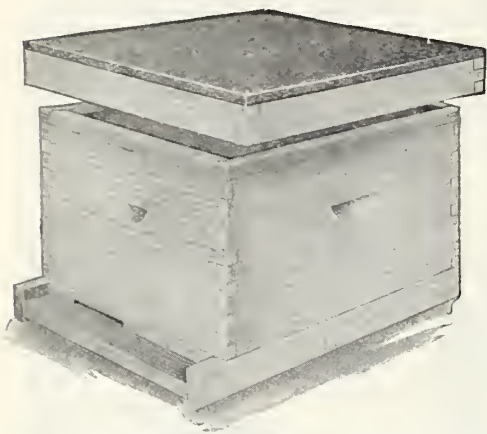
Perfection Dairy Salt

10-lb. sack 25 cts., 25-lb. sack 50 cts., 280-lb. bbl. \$3.25.



START BEEKEEPING—IT PAYS WELL

Standard Hives



We handle the very best bee supplies made, the well-known Root Quality Line. Every article of Root Quality Bee Supplies is guaranteed to give you absolute satisfaction. If you do not find what you want listed on these two pages, write for our 48-page catalogue.

Standard Hive
with metal cover
KD. 10 Frames (no
comb-foundation).

5 for \$12.70

This Hive is the one most generally used by the largest honey-producers on account of its light weight and the ease with which it may be moved from one location to another. However, it must be packed for winter. It is of highest quality throughout, being made of best selected pine lumber, perfectly milled and fitted together.

This Hive is $16\frac{1}{4} \times 20$ inches, and $9\frac{1}{8}$ inches deep, outside measurements.

Hives in the flat are furnished with nails, tin rabbets, reversible bottom-board, metal cover, with inner cover, Hoffman frames. 8-frame Hives are 5 per cent less.

Cat. No.	DESCRIPTION	Quan.	Wt. lbs.	Price
22202	Standard Hive complete, no comb-foundation	1 KD	31	\$2 80
22203	Standard Hive complete, no foundation	5 KD	149	12 70*
22205	Standard Hive complete, full sheets foundation	1 NP	33	6 20

*Packed in four packages.

What is said about the Root Hive applies, of course, to Root Hive-Bodies. The standard dovetailed Hive is of Langstroth dimensions, 10-frame size, and measures $16\frac{1}{4} \times 20$ inches and is $9\frac{1}{8}$ inches deep. The Hive-Body may be used either as a brood-chamber, i. e., the lower story of the Hive, or as a full-depth upper story or super for extracted honey, thus forming a two-story Hive. Nails and tin rabbets included with bodies. No division-board.

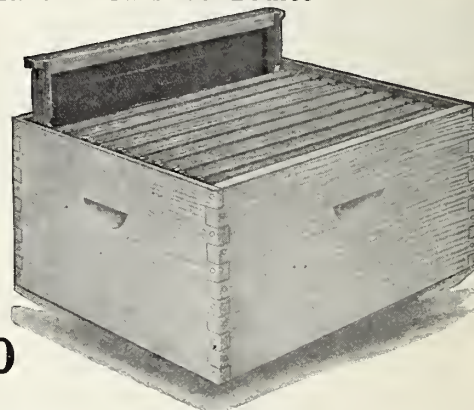
Cat. No.	DESCRIPTION	Quan.	Wt. lbs.	Price
22482	Standard Body with frames, no foundation	1 KD	15	\$1 40
22488	Standard Body without frames	5 KD	45	3 40
2910	Hoffman Frames for use in these bodies	50 KD	25	2 30
2910	Hoffman Frames for use in these bodies	100 KD	47	4 50

8-frame Hive-Body prices are 5 per cent less.

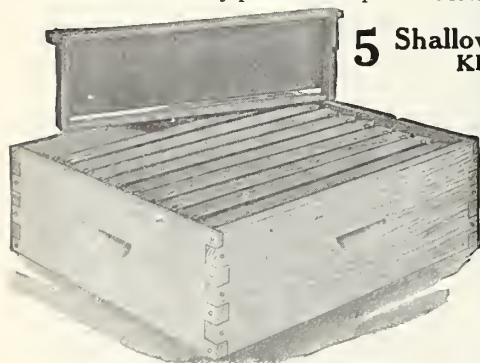
It Pays to Have Extra Hive-Bodies

Five
Hive-Bodies
10-Frame Size
No Frames

\$3.40



5 Shallow Extracting Supers \$3.90
KD. No foundation



Shallow Extracting Supers ($5\frac{11}{16}$ inches deep)

This Super is largely used in the production of chunk honey. It is also used for producing extracted honey in shallow frames, two of these frames fitting together in an extractor comb pocket of 12-inch width. Two of these Supers may also be used as one brood-chamber Hive, and any style of Super may be used above for comb or extracted honey. This Super is also used for section-holders holding 4 x 5 sections. This is our regular extracting Super, $5\frac{11}{16}$ inches deep, and is furnished with shallow Hoffman frames, $5\frac{3}{8}$ inches deep, without foundation. No tin rabbets or division-boards furnished.

Cat. No.	DESCRIPTION	Quan.	Wt. lbs.	Price
22522	10-Frame Super with shallow frames, no foundation	1 KD	9	\$0 85
22523	10-Frame Super with shallow frames, no foundation	5 KD	39	3 90

Beeway Section Super ($4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{7}{8}$)

This Beeway Section Super, $4\frac{3}{4}$ inches deep, is most commonly used. It takes slotted section-holders, slotted wood separators, follower, and springs, and is furnished with or without sections, and with or without inch foundation starters. It may be used on any of our single or double-walled hives, tiered up one or more high.

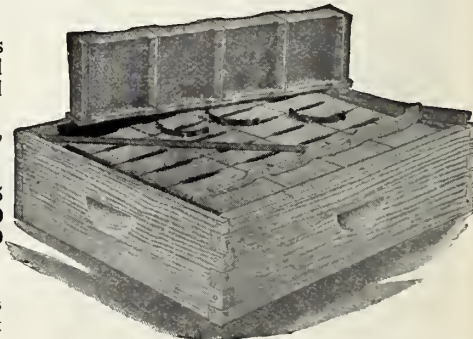
Super complete without sections includes nails, flat tins, end-stops, Super springs, slotted section-holders, slotted separators, and follower.

Cat. No.	DESCRIPTION	Quan.	Wt. lbs.	Price
22542	10-frame Super, without sections or foundation	1 KD	8	\$0 85
22543	10-frame Super, without sections or foundation	5 KD	42	3 90
22545	10-frame Super, with sections, full sheets	1 NP	11	2 40

Plain Section Super ($4 \times 5 \times 1\frac{3}{8}$)

It is a deeper Super ($5\frac{11}{16}$ inches), and is fitted with section-holders and M fences with end stops and springs. The regular $16\frac{1}{4}$ -inch ten-frame width will easily admit eight section-holders and eight fences with Super springs. Super complete without sections includes end-stops, section-holders, fences, Super springs, flat tins, and nails.

Cat. No.	DESCRIPTION	Quan.	Wt. lbs.	Price
22552	10-frame Super complete, no sections or foundation	1 KD	11	\$1 50
22553	10-frame Super complete, no sections or foundation	5 KD	50	6 90
22554	10-frame Super with sections, 1-inch starters	1 NP	13	2 70



$4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{7}{8}$ Beeway Section Super

BUY ROOT BEE SUPPLIES—SAVE MONEY



Root Section Guarantee

Made of finest basswood lumber, sorted with great care, dried exactly right, planed and cut exactly, expertly polished, dove-tailed perfectly. Rounded bottom, V-grooved, so wood bends without breaking.

100 BEEWAY SECTIONS \$1.20
4 1/4 x 4 1/4 x 1 3/8

Quan.	4 1/4 x 4 1/4 x 1 3/8 in.	Wt. lbs.	Price	4 x 5 x 1 3/8 in.	Wt. lbs.	Price
100	2440.....	8	\$1 10	2450.....	6	\$1 00
250	2441.....	17	2 70	2451.....	14	2 45
500	2442.....	31	5 25	2452.....	28	4 75
1000	2443.....	62	10 50	2453.....	56	9 50

Three-Ply Airco Comb Foundation



This wonderful foundation for brood and extracting combs is the best because there is no sagging, no warping, one-third more worker cells, least amount of gnawing, and 7 sheets to the pound.

Showing the three plies before and after milling.

Leads all others in volume of sales.

10-sheet pkg. 5000. For Hoffman Frames 8 x 16 3/4.....\$0 90
50-sheet pkg. 5003. For Hoffman Frames 8 x 16 3/4..... 4 15

Single-Ply Airco Comb Foundation

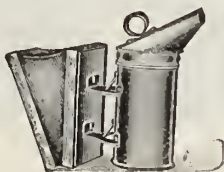
Genuine Airco Process Foundation, made into clear tough sheets from finest quality pure beeswax. Brood Foundation is cut in sheets size 8 x 16 3/4 inches; Super Foundation sheets are 3 7/8 x 15 3/4 inches and 3 11/16 x 14 1/4 inches.

The package numbers in the following price-list are for medium brood sizes, 8 x 16 3/4, and for thin super sizes, 3 7/8 x 15 3/4 only. For 4 1/4 x 4 1/4-in. section.

	Medium	Per pkg.	Thin	Per pkg.
10-sheet pkg.	5110.....	\$0 75	1-lb. box	5331.....\$0 70
50-sheet pkg.	5113.....	3 50	5-lb. box	5333..... 3 25

Smokers

The latest improved model has anti-spark tube, which provides a safe force draft, has long-life flexible hinge, and wire handle, that is always cool. 423, Standard Tin Smoker, with 3 1/4-inch fire-box (weight 2 lbs.), 95 cts. each.



Queen Excluders

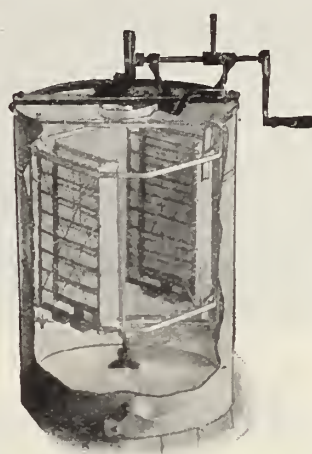
Queen Excluders are used to confine the queen to the brood-chamber, and are very generally used in the production of extracted honey. 4241, 10-frame, 7-wire and wood, 16 1/4 x 20 inches (weight 3 lbs.), 65 cts.

Root Bee-Veils

Root Indestructible Bee-Veil, made of highest grade, dead-black wire cloth, is comfortable and snag-proof. Can be worn on any hat. Root Indestructible Bee-Veil, weight 1 lb.....\$0 80
253 Veil, cotton tulle throughout, weight 3 ozs..... 80

Root Collapsible Bee-Hat

Designed especially for beekeepers' use. 256, Root Bee-Hat (weight 4 ozs.), 80 cts. each.



Extract Your Honey ROOT'S TWO-FRAME REVERSIBLE EXTRACTOR

The two-frame reversing machine has side-hinged pockets so that the combs may be reversed without taking them out of the extractor. It is also equipped with a brake and slip gear, when the side crank model is ordered. It takes standard Hoffman frames or two half-depth frames.

Only \$21.00

Hive Tool

This tool is indispensable in scraping frames and prying them loose. No. 404. 8-in., 45 cts.

4215—Root two-frame Reversing Extractor with slip gear and brake, suitable for an apiary of 10 to 25 colonies.

Root Foundation-Fastener

The cut at the left shows the Root Foundation-Fastener with lamp. It is a very rapid tool and gives excellent results where a cheaper tool is wanted. 415, Root Fastener with lamp (wt. 8 ozs.), 60 cts. each. 416, Root Fastener without lamp (wt. 2 ozs.), 20 cts. each.



without board 15 cts. each. 22676, Porter Board with Double Escape, nailed (weight 2 lbs.), 50 cts. each.

Double Exit Bee-Escapes

In taking off honey the Bee-Escape is the greatest labor-saver ever invented. It frees the supers of bees so that no shaking of heavy supers or smoking is necessary. 411, Double Escape, 15 cts. each. 22676, Porter Board with Double Escape, nailed (weight 2 lbs.), 50 cts. each.

Spur Wire-Imbedder

This is an excellent device for imbedding the wires of frames into the sheets of foundation. The teeth are broad and blunt so there is no danger of weakening the foundation.

401, Spur Wire-Imbedder (weight 3 ozs.), 20 cts. each.



Wire for Frames

This Wire is used to hold foundation or combs securely in the frames, and at the same time reduce the danger of sagging. 670 feet are required for 100 Hoffman frames. 447, 1/2-lb. spool tinned wire, 700 feet, 25 cts. each.



Starting Right with Bees

The best beginners' book that is on the market. It was written by the editors of *Gleanings in Bee Culture*.

128 Pages

124 Illustrations

BEAUTIFUL FABRIKOID COVER

75c.

Above prices do not include postage. If wanted by parcel post, add postage at your parcel post zone rate, using weight given in connection with each article



Make Money...Raising Poultry

Without a doubt, competent poultry keepers are now earning satisfactory profits from their well-cared-for flocks. With the cost of grain lower than it has been for many years, and the price of eggs on the increase, the outlook for the poultry industry is most encouraging.

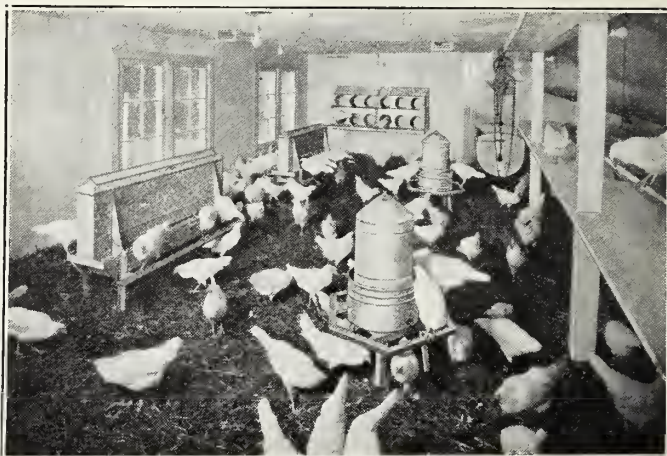
Everywhere there is a daily market for poultry and eggs, especially eggs. The supply seldom exceeds the demand. Consumers will gladly pay cash for fresh poultry meat and eggs.

To those interested in poultry raising, we offer our services and facilities, backed by our many years' experience in this field.

Poultry Equipment and Supplies

For many years we have been the recognized headquarters for poultry supplies and equipment of approved value. It has always been our aim to supply only those necessities which the experience of our customers and ourselves has shown to be most practical and most profitable. On the following pages will be found hundreds of items for the successful raising of poultry. We welcome the opportunity to serve you.

The I. W. SCOTT COMPANY



A modernly equipped laying house

BABY CHICKS

You cannot afford to be too particular, in the purchase of Baby Chicks, in knowing that they are from well-bred flocks and will develop true to type. Remember this—a Baby Chick is no better than the foundation stock from which it was hatched. We exercise extreme care in the selection of our Baby Chicks and supply only Chicks from selected matings and blood-tested flocks, under state supervision.



We can supply all popular breeds.

We also make a specialty of White Pekin Ducklings and Bronze Baby Turkeys.

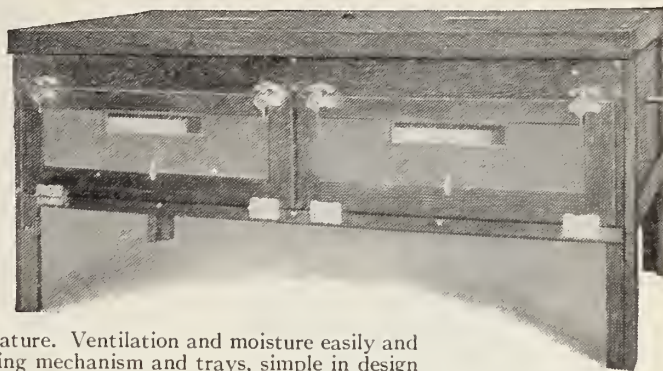
We suggest placing your order in advance, specifying the date you want delivery.

Price-List gladly sent upon request

Hatch Your Own Chicks with the Jamesway Electric Incubator

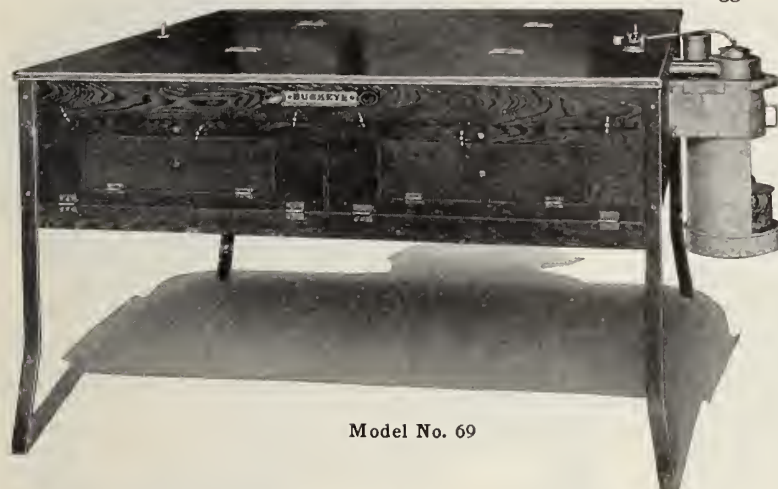
Here is the ideal Incubator for the person who wants to start small and grow by adding units without discarding the original equipment. The new Jamesway Electric Incubator has a capacity of 360 eggs. Additional 360-egg units can be added as needed. You never have to throw away or discard units as your business grows. Built with the very best of materials and skilled workmanship. Jamesway offers you this insulated electric Incubator, including all tried and proven mechanism of the very latest and most efficient type, at a surprisingly reasonable price. The most dependable electrical heating units are used. Automatic thermostatic control cuts out within one-half a degree, thus maintaining very even temperature. Ventilation and moisture easily and simply controlled as desired by the operator. Positive egg-turning mechanism and trays, simple in design and strong construction. It is 58½ inches long, 29½ inches wide, and it stands up 30 inches from the floor. Can be had for 110- or 220-volt current. \$65.

ASK FOR A SPECIAL CIRCULAR



Buckeye Standard Incubators

With New Automatic Egg Turners



Model No. 69

The line of Buckeye Incubators affords a range of capacity from 75 to 576 eggs. This meets the demand expressed today by users of domestic Incubators. All the machines are constructed of cypress—the best material ever found for Incubators and are finished in natural grain, with the most durable of varnishes.

The four larger models have double walls, with heavy insulating material between, assuring retention of heat with the utmost fuel economy.

The Buckeye Patented All-Metal Thermostat insures absolute regulation of temperature. It is absolutely reliable.

The heating-tank is built of heavy copper.

Underwriter's Label on all models, except No. 65, as a warranty against fire-hazard. All Buckeye Incubators, except No. 65, are equipped with Buckeye Automatic Egg-Turners. The tray is strongly and simply constructed and there's nothing to get out of order. Egg-Tester and Thermometer furnished free with each Buckeye Incubator.

	Capacity	Weight	Price
No. 65.	75 eggs	53 lbs.....	\$18 50
No. 66.	143 eggs	113 lbs.....	39 50
No. 67.	286 eggs	175 lbs.....	57 75

	Capacity	Weight	Price
No. 68.	416 eggs	205 lbs.....	\$76 50
No. 69.	576 eggs	270 lbs.....	97 50

GUARANTEE. Every Buckeye Incubator is guaranteed to hatch more chicks and stronger chicks than any Incubator of any other brand. The perfect construction of all mechanical parts is also guaranteed and any Buckeye Incubator or part thereof that does not fulfil our guarantee in every particular will be replaced without question any time within 40 days.

Signed, THE BUCKEYE INCUBATOR COMPANY



Oakes Electric Incubator and Brooder

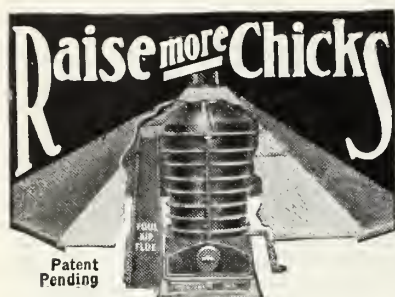
The Oakes Electric Hen presents the very latest and most improved inventions in artificial incubation. Simply attach to a light socket, adjust the heat with the automatic thermostat, and the heating requires very little attention for the entire hatch. The cost of heating is surprisingly small in a room of ordinary temperature. The heating element in the top distributes the heat evenly throughout the chamber. After placing eggs in the machine, the only attention necessary is to cool the eggs in the usual manner and turn them twice a day by rolling slightly with the palm of the hand. The regulator automatically turns the current on and off as required.

The top of the incubator can be used as an electric brooder when you are through hatching, and for this purpose a double brooder curtain and a set of brooder legs is furnished with each incubator. Made for 32-

volt, 110-volt or 220-volt alternating or direct current, but in ordering be sure to specify both voltage and kind of current that you are going to use.

No. 87. 60-egg size, complete with thermometer, brooder curtains, egg-tester, and legs, \$13.80, postpaid \$14.15.

No. 88. 100-egg size, with same accessories, \$18, postpaid \$18.50.



The Jamesway Brooder

Don't take chances. Your whole success depends on the chicks you raise. And that means, very largely, the Brooder you use. The Jamesway is the only Brooder that has a special air-purifier and also an air-moistener—two exclusive Jamesway features.

Jamesway brooded chicks grow faster and stronger because they do not breathe over and over foul, flat, lifeless air.

The Jamesway is the only Brooder with an automatic fire-control damper located in the pipe. The damper works automatically with the draft and check dampers. No overheating, then chilling of chicks. The Jamesway furnishes a steady, even fire all the time. The heat-radiation surface of the Jamesway Brooder is nearly doubled by the use of seven radiation fins running completely around the body of the stove. In this way, more heat is thrown off with a given amount of coal than without this extra heating surface.

The hover revolves completely around the pipe on a cast-iron collar, giving strength and rigidity. Two doors are provided. The one above drops down for coaling. The door below tilts upward for tending fire, cleaning out ashes, rearranging litter or cleaning. Both sizes are made for 4-inch stove-pipe.

No. 652. Coal capacity about 35 pounds, 52-inch hover. Usual rating for this size stove is 500 to 1,000 chicks but from 400 to 500 chicks is recommended in a brooder-room 8 to 12 feet square. **\$23.80.**

No. 660. Coal capacity about 45 pounds, 60-inch hover. Usual rating for this size stove is 1,000 to 1,500 chicks but from 300 to 800 chicks is recommended in a brooder-room 10 to 18 feet square. **\$26.80.**

DESCRIPTIVE CIRCULAR ON REQUEST

Simplex Brooder Stove

Successfully Broods Chickens, Turkeys, or Pheasants

The Simplex is constructed with heavy cast-iron base and burner, with cast-iron legs. The body of the Stove is made of heavy black sheet steel. It has a large circulating radiator on the top, around which the heat from the burner must pass before escaping. The heat is caught by the deflector which covers and extends over the top of the radiator, so that all the heat is deflected to the floor and not allowed to go to the ceiling until it has warmed the backs of the chickens.

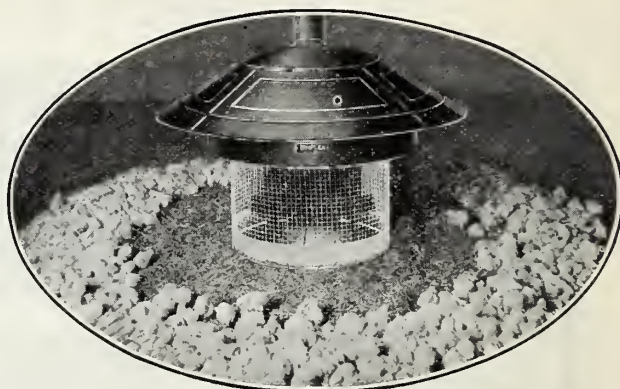
The Simplex Burner is especially designed to make "going out" impossible. All conditions of back-firing are removed, which insures perfect safety. It is capable of giving any range of heat desired. It can be regulated to run as low as the ordinary house-lamp and will go as high as necessity requires, and will not go out under either regulation.

SIMPLEX RADIATOR AND DEFLECTOR. These are fuel-saving features of this Stove. Every heat unit must make a complete circle around the body of the Stove through the radiator before its work is done and it is allowed to escape through the stove-pipe. The oil-consumption is from 1 to 5 gallons per twenty-four hours, depending on the size Stove and time of year that you are brooding your chicks.

Size	Capacity	Diam. of Deflector	Height of Stove	Diam. of Radiator	Diam. Fire-Cyl.	Price
Baby	250 Chicks or less	26 in.	20 in.	19½ in.	10 in.	\$24 00
Junior	500 Chicks or less	35 in.	26 in.	23½ in.	12 in.	29 00
Senior	1,500 Chicks or less	41 in.	30 in.	28½ in.	14 in.	33 00

Furnished with gas-burner and automatic gas-regulator in place of oil-burner at same price. Oil-burning stove will be shipped on orders unless gas equipment is specified.

SPECIAL CATALOGUE ON REQUEST.



Jamesway Electric Brooder

An efficient, dependable, and economical Brooder adapted for small broods of chicks. It is equipped with a specially designed heating unit which is automatically controlled. The canopy is made of galvanized iron. Curtains around edge of Hover are detachable. Regularly furnished for 110-volt light circuit but can also be had for 220 volts. Complete ready for use.

No. 696. 21-in. Uninsulated Hover for 50 chicks. **\$3.95.**

No. 698. 32-in. Double-Shell Insulated Hover for 200 chicks. **\$9.95.**

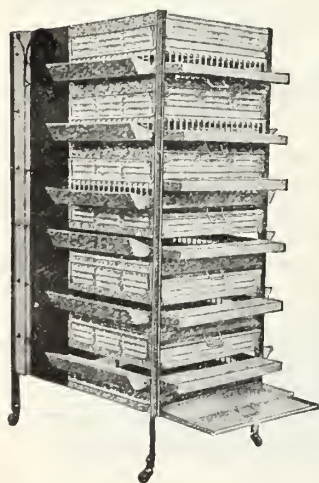


Jamesway Electric Brooder

The MaKomb Insulated Battery Brooder

A battery particularly suited to cool rooms where the operator may not find it convenient to maintain high, even temperatures. Feed-pans are large, of proper design, and may be raised as the chicks grow. The chicks may be removed through the swinging sides and front, or through a hand-hole provided at the back in the brooding compartment. The electric equipment is the finest. Each compartment has automatic control and a 150-watt heating element.

	Size	Inside Dimensions	Capacity	Price
No. 54E.	4-compartment	26 x 42 in.	480 chicks.	\$69 00
No. 66E.	6-compartment	26 x 42 in.	720 chicks.	92 00



Newtown Colony Brooders

Will Raise Every Raisable
Chick—Ask Any Owner

The Newtown Coal-burning Brooder has the reputation of being the most efficient Brooder made. It needs no introduction to poultrymen. It was the first coal-burning, self-feeding, self-regulating Colony Brooder put on the market, having been longer in use than any other of its type. It is giving efficient service in every state in the Union and eleven foreign countries, and represents the modern up-to-date Brooder in the highest form of development. It is durable, easy to operate, safe, economical, and labor-saving.

Construction. Made of best-grade, heavy, heat-retaining castings.

Easy to Operate. Nothing complicated—full instructions furnished with each Brooder. Automatic regulator controls the drafts and no change in weather is too sudden for its adjustment.

Safe. Hot coals cannot roll out of the ash-pit door into litter. Has a double bottom, with dead-air space, and a heavy metal casting which prevents chicks from scratching litter against the hot fire-bowl.

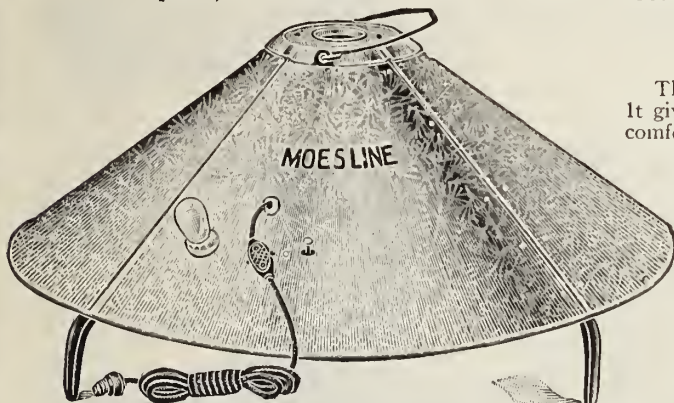
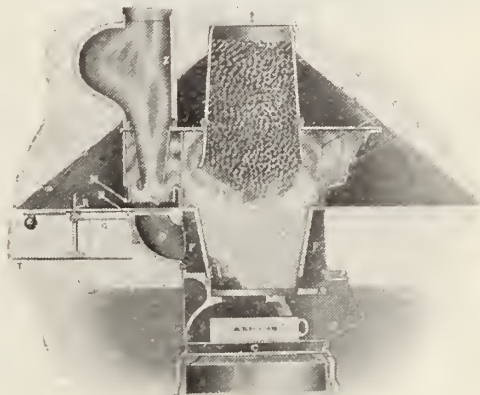
Economical. Built to last a lifetime. Fire-pot and combustion chamber designed to burn all gases, greatly reducing fuel cost.

Labor-Saving. Requires little attention. Magazine holds sufficient fuel to last 24 to 36 hours. Turning one small adjusting nut enables one to secure any desired temperature. Deflector is not disturbed in coaling. Hinged deflector lid gives easy access to ash-pit door. Smoke-box ell prevents soot or other foreign matter from falling down smoke-pipe and interfering with draft regulation.

Big Exclusive Features

Note the cross section view of the Newtown Coal Brooder opposite. When you think of these features you can see how Newtown is built to brood chicks under every emergency. It cares for all your chicks regardless of weather conditions; burns a good grade of soft coal satisfactorily, as well as hard coal; holds the fire and does not require constant attention. You don't have to get up at night to see if your chicks have enough heat. They're always safe and warm with Newtown.

Model	Chick Capacity	Coal Capacity	Diam. of Hopper	Diam. of Grate	Weight Crated	Price
No. 11.	Up to 500	48 lbs.	50 in.	11 in.	206 lbs.	\$32 50
No. 12.	Up to 1,000	65 lbs.	56 in.	15 in.	306 lbs.	40 00



Moe's Electric Brooder

This Brooder is equipped with a specially constructed heating unit. It gives an even, continuous heat properly distributed to insure the comfort and health of the chicks. The heat is constantly regulated by a simple and dependable automatic thermostatic control. This can be set at any desired temperature and automatically maintains this temperature under all conditions without any further attention.

The canopy is of heavy galvanized steel, with smooth wire-bound bottom edge. Fitted with substantial steel legs which cannot break. Each Brooder is complete with thermometer, electric cord, and attachment to connect to an electric-light socket. For 110-volt light circuit.

	Diam. of Canopy	Capacity	Rated Watts	Weight	Price
No. 388.	34 in.	300 chicks	300	25 lbs.	\$15 00
No. 389.	42 in.	500 chicks	400	30 lbs.	16 00
No. 390.	52 in.	1,000 chicks	500	40 lbs.	17 00

Jamesway Battery Brooder

This new Jamesway Battery Brooder is a distinct contribution to the poultry industry. It permits the poultryman to raise his chicks quicker and with less work than without one. You can place day-old chicks in the Battery Brooder, and, as they get larger, the Broiler fronts can be installed without moving chicks. There are two tiers of five sections each in this Battery, which will hold 1,000 day-old chicks. Each section operates independently and has an automatically controlled electric heating unit which extends across the top of each section, thereby giving an even distribution of heat.

The clearance of 1 3/4 inches between the floor-screen and removable droppings-pan helps to make this Battery Brooder easy to keep clean. There is plenty of feeding-space, as over-size pans are located both front and rear, giving space for 100 chicks to feed. These pans are easily removed and cleaned; the same can be done with the large-sized watering-trough which can be placed over the feed-trough or attached to the side of each section. Feed-and water-openings are adjustable to accommodate large or small chicks.

The heating connection for each unit is located in the corner post and can be reached quickly without trouble. You need to heat only the sections where the chicks are and turn on heat in other sections only as chicks are added. These heating units operate on 110 or 220 volt A.C. or D.C. current. Can be used without electric heating units if used in a heated room.

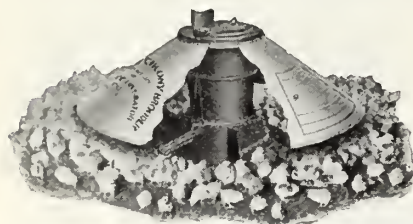
Over-all size 30 by 58 by 71 inches, mounted on substantial truck which makes it portable. Shipped knocked down for freight savings, but easy to assemble.

No. 627. Battery Brooder, with heat elements.....	\$136 00
No. 627. Battery Brooder, less Heat Units.....	104 00
No. 628. Single Section, with heat elements.....	13 25
No. 628. Single Section, less Heat Unit.....	9 95
No. 1181. Wire Broiler Fronts (20 required for complete battery).....	45



For very large broods of chicks, Jamesway has designed a continuous hot-water brooding system, built to take care of any size flock and to fit in any building. Write for prices.

The Buckeye Coal-Burning Brooder



A Brooder that burns hard or soft coal, is self-feeding, self-regulating, simple and safe. Nothing to break—built for long life. Equipped with a double automatic regulator that accurately controls the temperature every minute of the day and night. Stove is of heavy cast iron, equipped with rocker grate. Self-cleaning and anti-clog. Painted gray and trimmed in red, giving them very attractive appearance.

These Brooders are equipped with a revolving canopy, with large door, eliminating the canopy bail, rope, and pulleys and permitting easier cleaning around the Brooder. Note the following coal-capacity, size and weight of stoves, diameter of canopies, size of grates, and compare them with other coal-burning stoves of the same chick-capacity on the market today. Note the new low prices—lower than ever before.

	Capacity	Diam. of grate	Diam. of canopy	Coal capacity	Smoke pipe	Shipping weight	Price
No. 117.	350 chicks	8 $\frac{1}{4}$ in.	42 in.	25 lbs.	4 in.	77 lbs.	\$15 00
No. 118.	500 chicks	9 $\frac{3}{16}$ in.	52 in.	40 lbs.	5 in.	102 lbs.	17 50
No. 119.	1,000 chicks	10 $\frac{9}{16}$ in.	56 in.	60 lbs.	5 in.	133 lbs.	22 50
No. 120.	1,200 chicks		60 in.	75 lbs.	5 in.	145 lbs.	26 50

Any of the above Brooders equipped with gas burner in place of coal-grate at same price

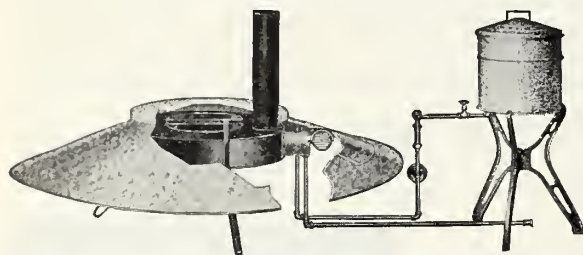
The Buckeye Blue-Flame Colony Brooder

This Brooder, with the new improved burner, is the most efficient and economical oil-burning Brooder in the world. Equipped with a self-feeding oil-container holding one gallon. The hovers are of galvanized steel, supported by cast-iron legs, and equipped with a heating-plate in the top of the canopy, increasing the efficiency of the burner. No complicated levers, valves, or thermostats. Self-feeding, self-regulating, simple, safe, durable, smokeless, odorless, and noiseless. The No. 29 Brooder is equipped with a high-efficiency Giant Burner Drum which produces 20 to 25 per cent more heat than the drums furnished with the other two models.

	Capacity	Diam.	Shipping weight	Price
No. 27.	250 chicks	34 in.	40 lbs.	\$14 50
No. 28.	350 chicks	42 in.	50 lbs.	15 50
No. 29.	500 chicks	52 in.	60 lbs.	18 50



The Buckeye Improved "Rite-Heat" Brooder



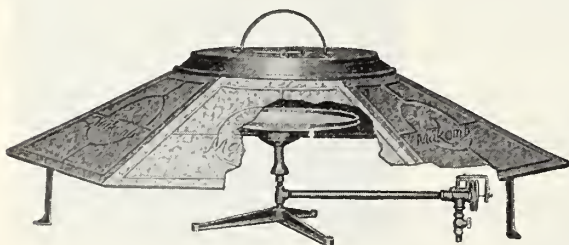
A Brooder that will take care of baby chicks in large numbers just as satisfactorily and under the same wide range of conditions as secured with Buckeye Coal-burning Brooders. It can be operated at almost any temperature and depended upon to supply the correct amount of heat for brooding purposes. There is no limit to the heat it can produce and it will care for chicks in a room of any size or temperature. Large Capacity—Simple—Efficient—Economical—Low Oil Consumption—Dependable Regulation.

The burners are made of cast iron and consist of only three pieces. They are completely assembled and attached to stove before leaving factory.

The thermostatically controlled regulator is the simplest, most dependable ever devised for Brooder use. It responds instantly to the slightest change. After it is once set, it needs practically no further attention. The oil-tank has a capacity of 6 gallons. It holds a supply sufficient for many hours, even in extremely cold weather.

	Capacity	Diam. of canopy	Shipping weight	Price
No. 103.	500 chicks	52 in.	111 lbs.	\$29 50
No. 104.	1,200 chicks	62 in.	119 lbs.	31 50

MaKomb Automatic Gas Brooder



The MaKomb Gas Brooder is built for use in those localities where natural or artificial gas is available to the poultryman. This Brooder is provided with the new hexagonal canopy, firmly supported on legs. The automatic valve-construction has been held to close limits, and every precaution taken to insure perfect operation. The burner is mounted on a heavy base and is especially designed for use with either natural or artificial gas, giving perfect combustion with either one.

	Capacity	Diam. of canopy	Weight	Price
No. 129.	150 chicks	29 in.	22 lbs.	\$8 40
No. 247.	250 chicks	47 in.	25 lbs.	10 40
No. 356.	500 chicks	56 in.	32 lbs.	11 40
No. 4. Automatic Gas Valve only. Use on any Gas-burning Brooder.				3 50

Hard Coal For Brooder Stoves

We furnish Chestnut-size Hard Coal, suitable for Brooder Stoves, put up in 100-lb. bags at \$1.35 per bag, f.o.b. Pittsburgh. Prices subject to market change. See page 180 for prices on pipe and other supplies for Coal-burning Brooders.

Moe's Electric Brooder

An efficient, clean, and economical Brooder fitted with a specially constructed heating unit. Will give an even, continuous heat, properly distributed, to insure the health and comfort of the chicks.

The heating unit is easy of access and meets the underwriters' requirements as to line voltage and breakdown tests. Equipped with a rubber-covered conductor cord with a soft rubber attachment plug, to eliminate breakage, and connects to an ordinary light-socket. Electric consumption about equal to 100-watt lamp.

Regularly furnished for 110-volt light circuit, but can also be supplied for 220-volt or 32-volt farm light circuit. Capacity, 75 chicks. Diameter of canopy, 19 in. No. 386, \$7, postpaid \$7.25.



The MaKomb Junior Electric Brooder

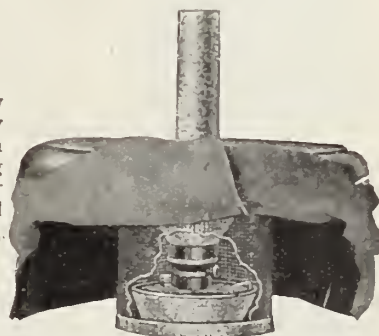
For small flocks, the MaKomb Junior is practical and economical. For general use, a 25-watt bulb provides ample heat, and with outside air touching freezing, a 40-watt bulb will maintain brooding temperatures. A galvanized steel drum encloses the bulb, preventing glare and producing steady circulation of the air throughout the Brooder. The shell, or canopy, is drawn of the best "Tite-Coat" galvanized steel, insulated with highly finished Masonite, which withstands long and hard use. The heavy, hemmed curtain is slit for chick convenience, and may be easily removed for cleaning. Complete with 10 feet of cord and screw plug but without bulb. Furnished in two sizes.

No. 122.	80-chick capacity; diam. 22 in.	Postpaid \$3 50	\$3 70
No. 230.	130-chick capacity; diam. 30 in.	5 00	5 25

The Red Hen Lamp Brooder

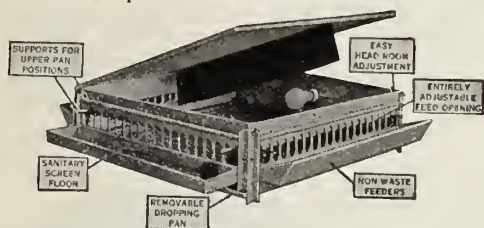
A FAVORITE OF MANY YEARS' STANDING

Equipped with Simplex Burner which is the best obtainable and large in size so that a low flame is sufficient. Smoking of the burner, which is always caused by too high a flame, is thereby eliminated. The flame can be conveniently adjusted without lifting the Brooder and a mica window in the top enables the operator to observe it. The top section is all metal, consisting of two walls, between which the heat from the lamp circulates. This gives a uniform heat over the entire brooding space and prevents crowding. The slitted curtain of heavy double flannel can be removed when desired. Diameter of the Brooder is 16 inches. 50-chick capacity, \$3.85, postpaid \$4.



The Silver Hen Brooder

A most practical Brooder for flock-owners. Has the advantages of a battery at low cost.



The screen floor, 30 by 30 inches, is big enough for baby chicks or 8-weeks-old broilers. Furnished with two large feed-troughs and one water-pan. Adjustable head-room from 7 to 12 inches. Hemmed cloth curtain retains heat in brooding section. Cover lifts off. Feed-openings adjustable so the smallest chicks can't get out. For broiler feeding, pans are raised to cover feed-holes. Broilers feed through slot. Electric equipment provides approved porcelain socket, 10 feet of cord with plug, but no bulb. Often used in heated rooms or near a brooder stove without electric equipment.

No. 830.	Silver Hen Electric Brooder	Postpaid \$8 25	\$8 60
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MaKomb Gro-Mor Brooder

A low-priced primary Brooder-fibre box and wire screens floor made durable, waterproof, and equipped with feed- and water-pans. The box is removable and can be replaced at nominal cost. Inside dimensions are 20 by 24 inches by 7½ inches high, giving ample head-room for chicks 3 to 4 weeks old.

The illustration shows all details of construction excepting the optional electrical equipment, which consists of 10 feet of cord, porcelain socket, terminal plug, and circulating drum to enclose the bulb. (Bulb not furnished.)

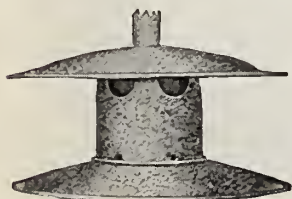
No. 624.	Gro-Mor Electric Brooder	Postpaid \$2 40	\$2 60
No. 724.	Gro-Mor Non-Electric Brooder	1 80	2 00



Putnam Brooder Heater

The Putnam Brooder Heater is the heating plant for the Putnam Home-Made Brooder. Directions for making this brooder at trifling cost are packed with every Heater. Anyone can build one in an hour or so with no tools but saw and hammer. It will care for 35 to 60 chicks. The Heater is made entirely of brass and galvanized iron and is practically indestructible. It holds one quart of oil and burns from eight to ten days without refilling or any other attention. The Heater cannot be blown out by a hurricane. It is firesafe and foolproof. Tens of thousands of Putnam Brooders have been built and used with success.

Price \$4.75 postpaid





Jamesway Round Brooder House

DURABLE—RUGGED—PORTABLE

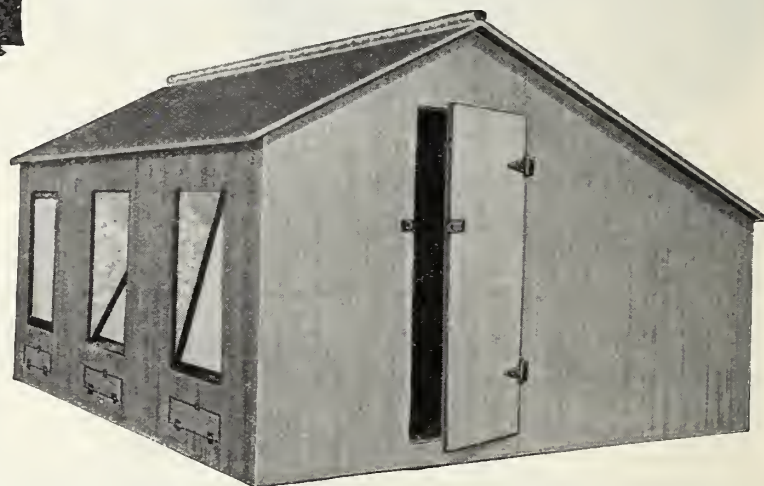
This is the type of Brooder House any poultryman would be proud to have on his place. It has been designed primarily for efficient use and yet makes a handsome building to have in the poultry-lot.

The most vital factors in poultry-raising are provided for in this House. **Sunlight** comes streaming in through the four big 6-pane, transom ventilating windows which can be adjusted to let the sunshine reach the floor.

Fresh Air is one of the requisites of little chicks, and the Jamesway Brooder House permits plenty of it to circulate. Particular care has been given the ventilation so the House will be devoid of drafts.

The side walls are made of Jamesway Insulation Board waterproofed by immersion in a bath of enamel. Enough emulsified asphalt is furnished to thoroughly soak roof and waterproof it. The floor sills and rafter sills are factory built, in three sections, of triple layers of 1-inch sound stock, and the joists consist of two 2 by 4-inch and three 2 by 8-inch sound wood cut to length. The door is factory built and 20 by 60 inches on a wood frame and is covered with insulation board.

Inside diameter of the house is 11 feet 5½ inches; side walls 5 feet high; and center height, 6 feet 8 inches.



This House is portable and may be moved at will. It can be used, not only as a Brooder House, but also as a back-lot poultry-house, cockerel-pen, isolation house, etc. Houses 350 baby chicks or 50 hens. Shipped knocked down, in order to save freight, but it can be erected very easily. (Skids not furnished with house.)

No. 400. Without Floor.....\$110 00

No. 401. With Single Floor.....134 50

F. O. B. Pittsburgh

The MaKomb Brooder Houses

MaKomb Brooder Houses have been designed to be of practical use after the brooding season is over and the chicks matured. As a result, you can buy a MaKomb Short-Hip Brooder House which is not too big for brooding 500 to 800 chicks, and which can be used to advantage after the brooding season as a laying-house, or for almost any other purpose.

The House is of all-wood construction. It has a tight roof of tongued and grooved clear fir, and, as an added assurance of all-year weather tightness, is covered with high-grade felt roofing. Walls, floor, and sub-floor are kiln-dried fir, tongued and grooved. Windows are 18 by 30 inches and covered with Cel-o-glass. One window to each 4-foot section. Finished with two coats of high grade outside white paint. The style and dimensions of the Houses have been determined as the result of an extensive study of the average flock-owner's needs and consultation with well-known authorities. They are so constructed that buyers of 10 by 8-ft. or 10 by 12-ft. houses can add additional sections later, bringing the size of the House up to 10 by 20 ft., or even larger if desired.

The 10 by 16-ft. House, either one- or two-room style, is very good for brooding a flock of approximately 600 chicks. It also has ample capacity to house 100 layers and to give them real protection.

Shipped complete, ready to set up with minimum of labor. Circular and detailed specifications on request.

	Shipping weight	Price
No. 18. 10 ft. wide by 8 ft. long.....	1,080 lbs.	\$79 50
No. 212. 10 ft. wide by 12 ft. long.....	1,460 lbs.	105 00
No. 316. 10 ft. wide by 16 ft. long.....	1,880 lbs.	124 00
No. 44. Extra 4-ft. sections.....	380 lbs.	23 00

F. O. B. Pittsburgh or prepaid to destination if shipped from factory

Monitor Revolving Head Ventilator

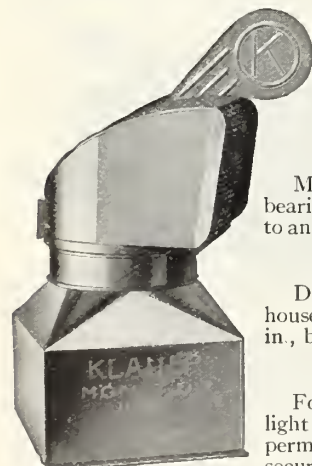
Made of the best grade of heavy galvanized steel and has full ball-bearing head. Weather-proof and freeze-proof construction. Can be fitted to any pitch of roof. Flue 12 in., base 16 x 16 in., height 36 in. No. K12. \$6.50.

Ney Stationary Head Ventilator

Designed especially for poultry houses, hog-houses, and other small houses. Made of heavy galvanized steel and strongly braced. Flue 12 in., base 16 x 16 in., height 28 in. (Not illustrated.) \$6.95.

Klauser Ventilating Wall Window

For barns, poultry houses, hog-houses, or any other frame building where light and ventilation are desirable. Made of 26-gauge galvanized steel. Latch permits glass to be tilted into eight different positions. Window may be locked securely. Glass 20 x 28 in., building opening 20¾ x 28¾ in., overall size of frame 25½ x 33¾ in. No. K2028. \$2.50 each, \$13.50 for 6, \$26 per doz.



Monitor Ventilator



Ventilating Wall Window



"Successful" Grain-Sprouter

The feeding of sprouted oats is highly endorsed by the poultry experts of the agricultural experiment stations, because grain fed in a sprouted condition is easily digested, goes three times as far, and is therefore much cheaper and better than when fed in a dry condition.

You can make your hens lay 40 to 50 per cent more eggs. You can reduce the cost of feeding 25 to 30 per cent by giving them SPROUTED OATS easily and quickly produced in the

"Successful" Grain-Sprouter

Made in Sections—Double Steel Walls—Fireproof—Safe to Use Anywhere in the House.

The most profitable appliance for poultry-raising since the invention of the incubator.

Manufactures for you in a week's time the best green egg-making feed at 15 to 18 cts. per bushel. Takes but 15 minutes a day to attend to.

Costs but one-half cent per day for kerosene.

This succulent, nutritious, green feed will turn your hens from idle feed consumers into industrious egg-producers at a time when it takes but one dozen of eggs to bring as much money as two or three dozen in spring or summer.

All our Sprouters have a hinged top, permitting the operator to sprinkle the grain from above in one operation. The water percolates through all the trays. This is a great labor-saving device and practically eliminates any kind of a muss-up.

PRICES AND CAPACITIES

No. 1. Base and 1 section;	2 trays; holds 8 to 10 quarts dry grain.	(For 30 to 60 hens).....	\$12 00
No. 2. Base and 2 sections;	4 trays; holds 16 to 20 quarts dry grain.	(For 75 to 100 hens).....	15 00
No. 3. Base and 3 sections;	6 trays; holds 24 to 30 quarts dry grain.	(For 130 to 200 hens).....	18 00
No. 4. Base and 4 sections;	8 trays; holds 32 to 40 quarts dry grain.	(For 250 to 350 hens).....	21 00
No. 5. Base and 5 sections;	10 trays; holds 40 to 50 quarts dry grain.	(For 400 to 600 hens).....	24 00
Each additional section and two galvanized all-steel trays.....			4 50

Moe's Lampless Oat Sprouter

Made entirely of metal. Strong and rigid.

Provides the very necessary green feed at all seasons. Healthy chickens and more eggs.

The frame is of steel, well braced and neatly painted. Has six heavy galvanized iron pans. Five of the pans have perforated bottoms to secure the proper drainage, and the bottom pan is solid to hold the drippings. Pans are interchangeable. Sectional frame can be quickly taken apart and stored in a small place.

Total height of frame 3 feet. Size of pans 16 by 18 inches. No. 110, \$5, postpaid \$5.35.



Moe's Lampless Oat Sprouter

Banner Root Cutters

Vegetables, such as cabbage, carrots, turnips, mangels, beets, and potatoes, furnish the essential green-food vitamins during the winter months.

With a Banner Cutter to quickly and easily cut and shred vegetables, the poultry raiser is fully equipped to keep up his green-feed rations during the months when his flocks are confined in winter quarters.

No. 7. Cuts fast and is easy running. Leaves feed in fine, ribbon-like strips. Makes choking impossible. Enough feed for a large flock of birds can be cut in two to five minutes. Price \$7.50.

No. 28. Intended for large poultry flocks, sheep, or lambs. Eight wide steel knives, fitted to 28-inch platter plate, gives great cutting capacity. Hopper is shaped for self-feeding. Capacity of hopper, 2½ bushels. Designed more particularly for power operation, but can be operated by hand. Shreds into ribbons but knives can be reversed to cut in flat pieces if desired. Price, including Pulley and Hand Crank, \$37.50. (Not illustrated.)

Efficiency Grain Sprouter (OPERATES FREE FROM MOLD)

This Sprouter is not an experiment but has stood the acid test and has revolutionized grain-sprouting.

The dry grain is poured into the sprouting-drum and allowed to soak in the soaking-trough for from four to six hours, when it is placed in the rack. Start one drum in this way each day. At the end of the fourth day the first drum will be full and ready to feed. Owing to the exclusive patented features, no lamp is necessary. It can be operated in any heated room in the winter and indoors or outdoors in the summer.

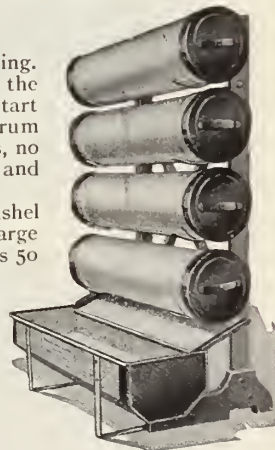
The Efficiency No. 3. The most popular model. It consists of four 1-bushel sprouting-drums attached to a sturdy frame, and soaking-trough large enough to soak one drum at a time. Intended for 900 hens. Stands 50 inches high, and takes 18 by 39 inches of floor-space. Price \$23.95.

The Efficiency No. 2. This model is the same as No. 3 except that it is only half as large in capacity. It has four ½-bushel sprouting-drums, trough, and frame. It turns out ½ bushel of sprouted oats per day and is intended for 450 hens. Price \$20.90.

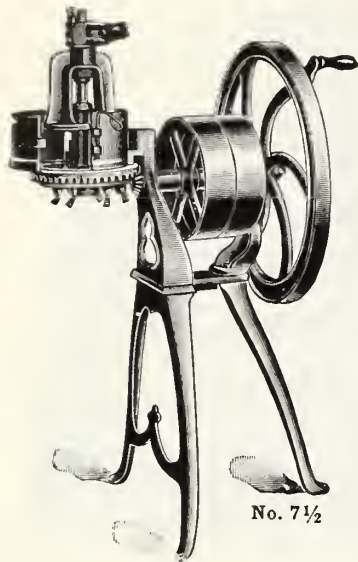
The Efficiency No. 3A. Exactly like the No. 3, but has no stand, and is intended to be used where the equipment can be secured to a wall. Takes 10 by 39 inches of floor-space. Price \$19.90.

The Efficiency No. 2A. Same as the No. 3A, except the drums are ½-bushel capacity, or the same as the No. 2 in capacity. Takes 10 by 22 inches of floor-space. Price \$16.90.

The Efficiency Little Wonder. Intended for flocks of 120 hens or less. Takes 12 x 15 inches of floor-space. Price \$12.40.



Efficiency Grain Sprouter



No. 7 1/2

Mann's Green Bone-Cutters

THE LAYING HEN IS THE PAYING HEN

The poultry-raiser wants eggs, and wants them when eggs are worth the most. Green bone and raw meat produce them. There is no doubt about that. Experience proves it; science shows why.

The hen will do her part if you give her a chance. The Mann's Bone-Cutter gives *you* a chance to give *her* a chance. It gives you a better chance than does any other bone-cutter.

Mann's Green Bone-Cutters have been sold for more than twenty-five years, and there are more of them in use today than of all other makes combined. We have sold them for many years and have yet to find a dissatisfied customer. Every machine is guaranteed, and must do the work.

No. 5-B. This Hand Bone-Cutter is designed for the small poultryman with flocks of 15 to 25 hens; can be used for 50. Weight 60 lbs. Price \$15.

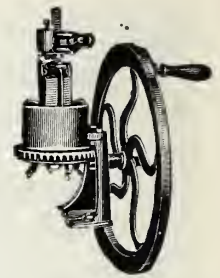
No. 7 1/2. Combination Hand and Power Bone-Cutter. Can be run either way without change of parts. Weight 140 lbs. Price \$28.

No. 7. Hand Bone-Cutter designed for flocks of 25 to 100. Weight 107 lbs. Price \$19.75.

No. 11. Combination Hand and Power Bone-Cutter. Intended for large flocks when the machine must be run by hand a portion of the time. Price \$45.

No. 12. An ideal all-power Bone-Cutter where large quantities of bone are to be cut. Capacity from 120 to 150 pounds per hour. Weight 261 lbs. Price \$65.

Send for complete Catalogue if you wish to know more about them



No. 5-B

Stover Grinding Mill

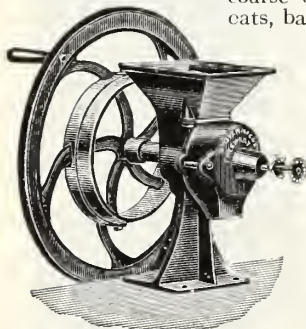
In this Mill are embodied all the good features of other hand grinding Mills to which have been added universal burrs or grinding plates that are adjustable for grinding coarse or fine. This machine grinds

oats, barley, rye, corn, peas, dry bone, shells, etc., for feeding to poultry. It is a well-designed machine, is strong and well made throughout and of excellent finish, has a 16-inch fly wheel and is light running.

No. 32. Hand Power, capacity 1 to 2 bushels per hour. Price \$4.50; postpaid \$5.

No. 35-B. Hand and Power, capacity 2 to 4 bushels per hour. Price \$8.50.

Extra Grinders for No. 32. Price 60 cts., postpaid 65 cts.; **No. 35-B,** 80 cts., postpaid 85 cts.



No. 35-B. Stover Hand and Power Mill

Black Hawk Grist Mill

Price complete, \$3.50
postpaid, \$3.90



With a Black Hawk Mill you can crack corn or grind any kind of grain to whatever degree of fineness will best suit the age or condition of your fowls.

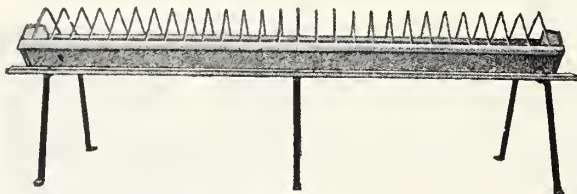
Grinds corn into meal, wheat into graham flour, rice or buckwheat into flour; in fact, an all-round household Mill that will grind fine or coarse.

Extra Grinders, per set, 75 cts. ppd.

Harris Poultry Feeder

For Wet or Dry Mash

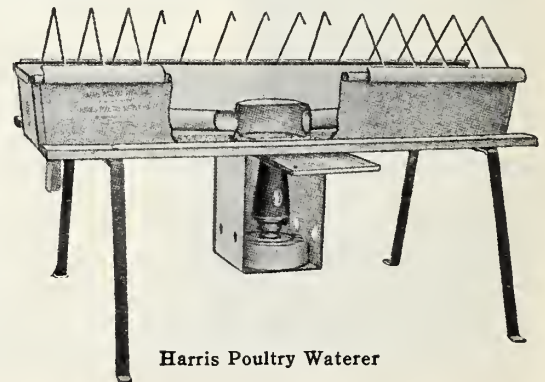
The wire guard keeps fowls out of the trough and saves the feed. Sturdily built of heavy galvanized steel with wooden perches and iron legs. Trough is 9 1/2 inches wide at top and 5 inches deep. Made in two sizes. **No. 1.** (Illustrated.) 7 ft. long with 3 pairs of legs, \$7.30. **No. 2.** 42 in. long with 2 pairs of legs, \$4.50.



Harris Poultry Feeder

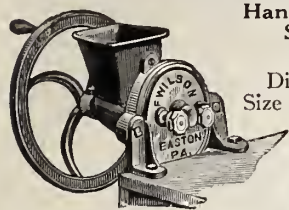
Harris Poultry Waterer

The Harris Waterer is designed for large flocks. It is an entirely new principle. Tubes through the center of the tank distribute the heat evenly and warm the water to a temperature of about 60 degrees when outdoor temperature is 20 degrees below zero. All excess heat passes out through tube at each end of tank, and water remains at same temperature. Top guard prevents fowls getting wet and contaminating the water. The tank and fire-box are made of heavy rust-resisting copper-bearing metal. Tank holds nearly 10 gallons of water and is provided with drain for easy cleaning. Length, 42 1/2 inches. Can be furnished with large lamp heater, electric heating element, or burner for natural gas. Fountain only, without heater, \$7.95. Fountain, complete with heater (choice of any heater), \$8.95.



Harris Poultry Waterer

No. 1 Wilson's Poulterer's Mill



Hand Power. For Grinding Dry Bone, Shell, and Corn for Poultry. To Bolt to Bench or Table

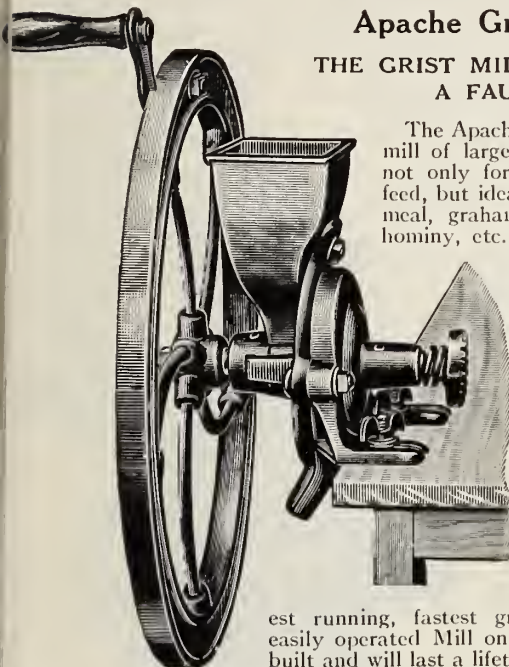
Diameter of hand wheel, 20 inches. Size of hopper, $2\frac{1}{2} \times 3\frac{3}{4} \times 4$ inches.

This Mill will grind, or granulate, dry bones, oyster and clam shells, grit, gravel stones, old crockery, glass, charcoal, corn, walnuts, and all sorts of grain. Also splendid in

the house for grinding stale bread, crackers, roots, barks, etc. The grinding surfaces are made of the hardest material, and will last for years. Weight 33 pounds. Price \$6.25.

Apache Grist Mill

THE GRIST MILL WITHOUT A FAULT



The Apache is an "all-round" mill of large capacity, suitable not only for grinding chicken-feed, but ideal for making corn-meal, graham flour, rye flour, hominy, etc., for table use. It will grind a quart of meal in three minutes. Has perfect adjustment for fine or coarse work.

Some of the special features of this Mill are a large fly-wheel, scientifically balanced, large hopper, ball bearings, adjustable regulator. These features make the Apache the lightest running, fastest grinding, and most easily operated Mill on the market. Well built and will last a lifetime. Price \$7.

Superior Rural Mail-Box



This Mail-Box is of the highest standard of workmanship and excellence of finish. Substantial, and operates perfectly. It is absolutely proof against all weather. Finished in weather-proof aluminum bronze. Made of 18- and 20-gauge galvanized steel, and is $23\frac{1}{8}$ inches long, 11 inches wide and $13\frac{3}{8}$ inches high. Conforms to the latest postal regulations. \$2.50, postpaid \$2.95.

Superior Suburban Mail Box

Opens at end, hinged at bottom and equipped with automatic steel hasp, keeping door tightly closed and yet easily operated by carrier or patron. Has letter-slot in door. This box cannot be erected or used on rural routes. For use in cities and towns having suburban side walk delivery. Size $18\frac{1}{2}$ inches long, $7\frac{1}{2}$ inches high and $6\frac{1}{4}$ inches wide. (Not illustrated.) 85 cts., postpaid \$1.

Jumbo Power Feed Mill

Here's a Feed Mill that Grinds Ten to Twenty Bushels of Grain an Hour. Grinds the Grain Fine and Grinds it Fast



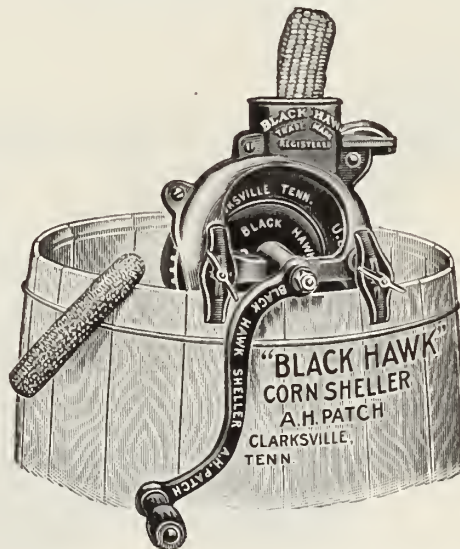
You can grind oats, rye, barley, shelled corn, wheat, millet, seed, salt, and bark with little power and at practically no cost. Oat hulls can be cut fine. Corn may be cracked or ground fine just as you desire. Simple screw adjustment enables you to grind grain just as fine or as coarse as your needs demand.

Simple as this Feed Mill is, it has a grinding capacity equaled by few. Built of steel and iron throughout, with long and well babbitted bearings. Safety springs protect burrs from nails, nuts, etc., and keep burrs apart when machine is running empty.

One set of fine burrs, also one set of coarse burrs furnished with each machine. Pulley 6-inch diameter by $3\frac{1}{2}$ -inch face, gives proper speed for operation with any engine or light plant. Speed 290 to 1,150 R. P. M. Shaft $1\frac{1}{8}$ inches cold rolled. Large roomy hopper. Firm, broad base. Burrs 6 inches. Weight 90 pounds. Height 33 inches. Power required $1\frac{1}{2}$ to 5 Horse Power. Price \$11.25.

Black Hawk Corn Sheller

Price \$3.25, postpaid \$3.65



The Black Hawk Corn Sheller has enclosed hopper and separator. This prevents scattering of the shelled corn. A wonderfully fast and easy running Sheller. Instantly fastened to barrel or box by two large strong clamps with wing nuts.

OUR POULTRY FEEDS

Our line of poultry feeds includes everything necessary to the successful rearing of poultry—feed for the little chick, the growing fowl and the laying hen.

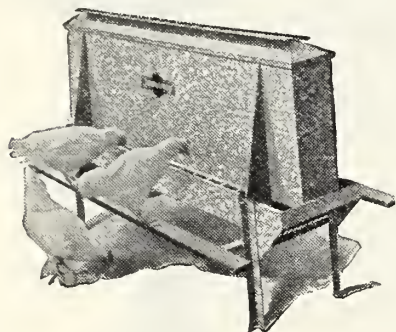
We aim to handle only "the best" and to give our customers "value received for every dollar expended."



Jamesway Poultry Equipment

EQUIPMENT THAT MAKES BIG EGG-YIELDS

Jamesway Poultry Equipment is built for the discriminating buyer who buys equipment not because of the price, but because of the service it will render in increasing egg-yields, in keeping hens healthy and contented, and in making it easier to care for them.



Jamesway Free Feed Cafeteria

FIVE BIG SELF-FEEDERS IN ONE

The only Feeder with a foolproof agitator.

The only "can't clog," "no waste" Feeder on the market.

Holds 50 to 100 pounds of mash, depending on size purchased; also has grit, oyster shell, meat-scrap and charcoal compartments.

Has tilting top to prevent hens from roosting there. Built of heavy, galvanized, rust-resisting, copper-bearing sheet steel. Unquestionably the best mash hopper made.

No. 527. Length 3 ft. Capacity 50 lbs. dry mash. Self feeds 75 to 100 hens for one week with one filling.....\$10 75

No. 528. Length 5 ft. Capacity 100 lbs. dry mash. Self feeds 150 to 200 hens for one week with one filling..... 15 50

Jamesway 8-Gallon Poultry-Waterer

Provides plenty of fresh, clean water for 100 to 150 hens.

Easiest Waterer to disinfect, clean, and fill.

Built of heavy rust-resisting sheet steel. A copper float opens and closes a non-rust brass valve, and keeps the water at the right level in drinking-pan.

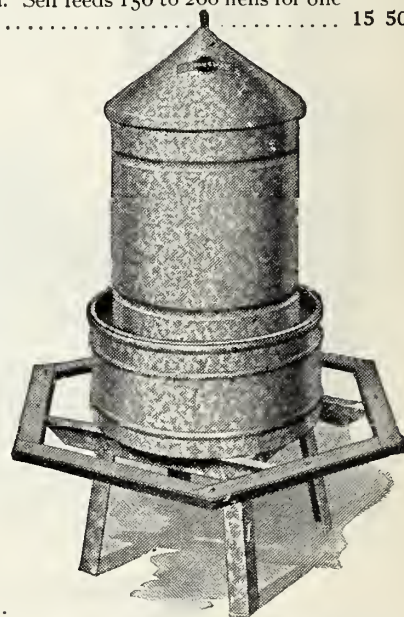
Your hens require water in winter if you want winter eggs.

No. 512. Lamp-heated Waterer, with Kerosene Lamp.....\$6 75

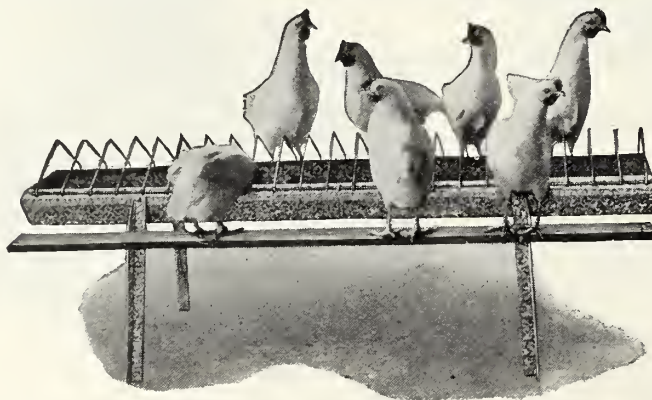
No. 513. Without Lamp..... 5 00

No. 514. Electric-bulb heated..... 7 50

No. 585. Stand for above Waterer..... 1 50



Jamesway Open Mash-Feeder



Big, roomy trough for feeding dry or wet mash and green feeds.

Wire guard prevents hens from getting into trough.

Wide lip on trough keeps hens from pulling out mash on floor.

No other trough like it. For feed-saving, cleanliness and real satisfaction, buy this Feeder. Length of trough 5 feet, width 20 inches over perches. Stands 25 inches high on sturdy metal legs; takes up little scratching room from the floor. No. 525, \$4.95. No. 657. Same as No. 525 except trough is 8 feet long. \$6.75.

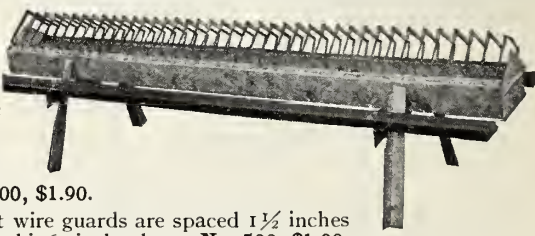
Jamesway Clean Feed Chick-Trough

Where feed is contaminated with droppings, diseases quickly spread and chicks do not grow evenly. This Clean Feed-Trough keeps chicks out of the feed. Spacing between wire guards can be adjusted from $\frac{3}{8}$ to $1\frac{3}{4}$ inches.

This Trough is useful for feeding not only young chicks but older ones as well. Two Troughs provide feeding-space for a brood of 250 to 350 chicks. Made of galvanized heavy sheet steel 44 inches long—6 $\frac{1}{2}$ inches wide. No. 600, \$1.90.

JAMESWAY GROWING FLOCK FEEDER. Same design as No. 600, except wire guards are spaced $1\frac{1}{2}$ inches apart and are not adjustable. It also is larger, holds 50 pounds of dry mash, and is 60 inches long. No. 500, \$1.90.

Stand can be furnished for either of above Feeders to raise them off floor. Extra, if wanted, \$1.40.



Shows Feeder with stand

Jamesway Chick-Waterer

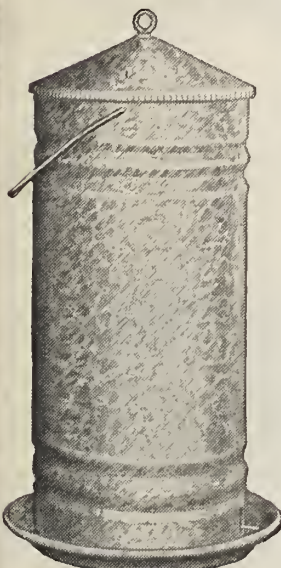
Poultry experts say this is the most satisfactory Chick-Waterer ever built. Made of heavy, galvanized, rust-resisting sheet steel. Keeps a constant supply of clean, fresh water available for the chicks. Only two parts to clean—the inverted bucket and pan. Won't tip over. Holds $1\frac{1}{2}$ gallons and weighs $4\frac{1}{2}$ pounds. Compare it with any other. Weight means long service. Thousands in use, and every one is giving real satisfaction. No. 507, \$1.25; postpaid \$1.40.



No. 507 Chick-Waterer

Jamesway 3-Gallon Gravity Waterer

A safe fountain for large broods of chicks. Sloping pan-edge prevents chicks from getting wet. Depth of water controlled by copper float concealed under tank. Float may be locked, which shuts off water. Tank can then be carried about without leaking. Unusually rugged construction. Conical cover prevents chicks from roosting there. Pan-edge raised high to keep out dirt. Holds 3 gallons. Enough for one colony brood for a whole day. A labor-saver that keeps chicks from getting soaked and chilled. No other Waterer with all these desirable features. No. 529, \$2.50.

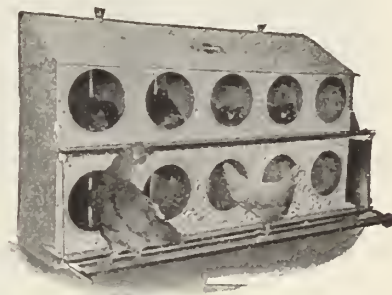


No. 529 Waterer

Jamesway All-Metal Nests

LICE- AND MITE-PROOF

Put Jamesway All-Metal Nests in your poultry-house and watch your hens side-step the old mite-infested wood boxes. The hard, smooth, sanitary, galvanized surface of Jamesway Metal Nests offers no place for parasites to hide and thrive. Jamesway All-Metal Nests are clean, sanitary, lice- and mite-proof, and easily cleaned. Simply swing them forward and upward. The back of the nest is open. Straw and shavings fall out, and the nest is cleaned. Swinging the perches up against the face of the nest prevents hens from roosting in the nest or on the perches. Raising the bottom perch automatically raises the upper one, an exclusive Jamesway feature.



Jamesway All-Metal Nests

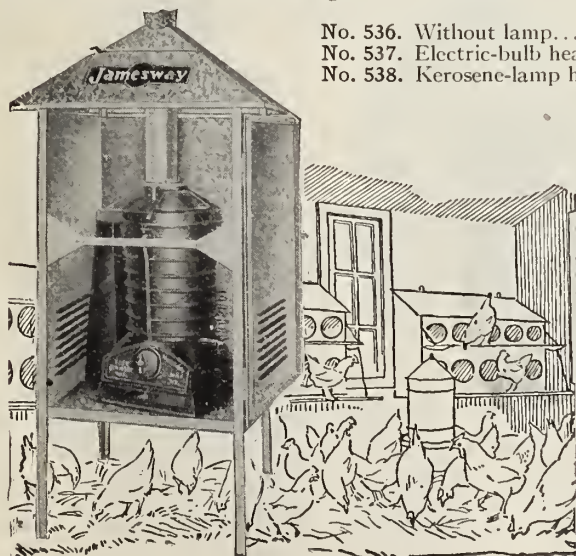
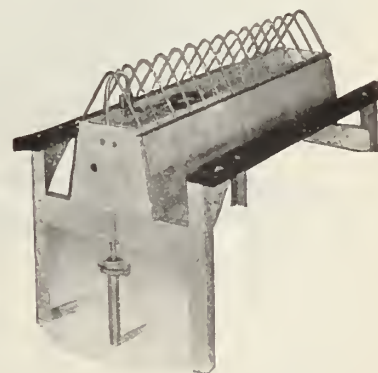
No. 823. 3-Nest Unit (1 tier, 3 ft. long).....\$4 50
No. 826. 6-Nest Unit (2 tiers, 3 ft. long)..... 6 25
No. 859. 9-Nest Unit (3 tiers, 3 ft. long)..... 8 75
No. 830. 10-Nest Unit (2 tiers, 5 ft. long).... 9 25

No. 635. 15-Nest Unit (3 tiers, 5 ft. long)...\$13 50
No. 831. Trap Attachment, extra, each 40 cts.,
doz..... 4 50

Jamesway Pressure Waterer

Poultrymen who have running water in their poultry-houses will find this Automatic Pressure Waterer a great labor-saver. Built large enough for 150 to 200 hens. Can't overflow. Copper float and brass valve keep the water at right level. Can be adjusted to any water pressure. Wire guards keep the hens out of water. Guards tilt back for cleaning. Sets up off the floor on sturdy metal legs. The rust-resisting copper-bearing steel trough is 2 inches deep and 5 inches wide. It sets in a galvanized sheet steel base, and is 30 inches high to top of guards. Furnished in two lengths—3-foot and 5-foot. Can be furnished with a kerosene lamp or electric socket for the warming of water in winter.

	3 ft. long	5 ft. long
No. 536. Without lamp.....	\$6 90	\$8 50
No. 537. Electric-bulb heated.....	8 75	11 00
No. 538. Kerosene-lamp heated.....	7 90	9 50



Jamesway Temperlator

"When Winter Comes"—Make Your Hens Lay and Pay!

This is a comparatively new, but ever so popular addition to the Jamesway line. It is popular because it is of dual purpose: it can be used as a poultry-house heater in the winter and as a brooder stove during baby-chick season.

The Temperlator is an all-metal cabinet into which is placed a regular No. 660 Jamesway Brooder Stove. The cabinet is 24 inches square, about 5 feet high, and stands 13 inches from the floor, on angle-iron legs. Close to the bottom are slotted openings through which the cool air is drawn and warmed before being circulated through the poultry-house. The thermostat on the stove regulates the heat. It works wonders in preventing egg-slumps during cold weather.

To use as a brooder stove in the spring, remove the stove from the cabinet and slip on a Jamesway Hover. This gives you just twice as much service out of your brooder stove as ordinarily.

No. 661. Temperlator Cabinet, without Stove.....\$16 50
No. 662. Temperlator Cabinet, with No. 660 Stove, less Hover. 34 00
No. 663. Temperlator Cabinet, with No. 660 Stove and Hover.. 40 00

Moe's Peerless Feeders

Intended for chicks and growing fowl. Made of heavy galvanized iron, with a large capacity and perfectly suited for either large or small flocks. The magazine or hopper is adjustable up or down for different kinds of mash and feed and can be set to feed slowly or rapidly.

Has a removable cover, so it is easy to fill, and the bottom is cone-shaped so the contents will not clog.

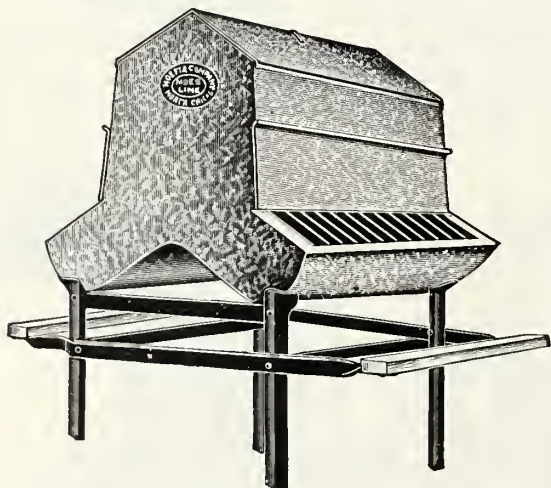
The slotted openings are accurately formed with turned-over edges to prevent any injury to the fowl. The vertical feeder-holes also make it impossible for the chicks to foul or waste the feed. Thirty chicks can feed at one time. Made in two sizes.



No. 192. Diameter of base 12 in. 30 feeder-holes. Diameter of magazine 9½ in. Total height 12 in. Capacity 10 qts. \$1.35, postpaid \$1.50.

No. 193. Diameter of base 12 in. 30 feeder-holes. Diameter of magazine 9½ in. Total height 18 in. Capacity 18 qts. \$1.75, postpaid \$1.90.

Moe's Mammoth Dry-Mash Hopper



A large-capacity Hopper built on correct principles. Made of heavy galvanized iron, strong and substantial in every detail.

Has many excellent features; for instance, it will accommodate a full 100-pound bag of mash, doing away with the annoyance and waste of having a partly empty bag of mash on the premises. The top and also the feeder openings are provided with hinge covers which can be closed and thus protect the contents from the weather and from rats and mice.

The taper shape and interior construction provide a uniform automatic feed, and the wire grid and cross-wires prevent any waste.

The stand is of heavy angle-iron, painted, and has wooden bars for the poultry to rest on when feeding.

Length of hopper 35 in., width 21 in., height 18½ in. Capacity about 3½ bushels or about 125 lbs. of mash.

Height of stand 15½ in., total height 34½ in.

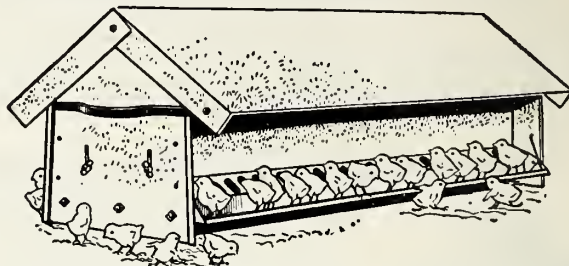
No. 3. Hopper and Stand complete, \$10.

PET SUPPLIES

DOG FOODS AND REMEDIES, BIRD SEED, ETC.

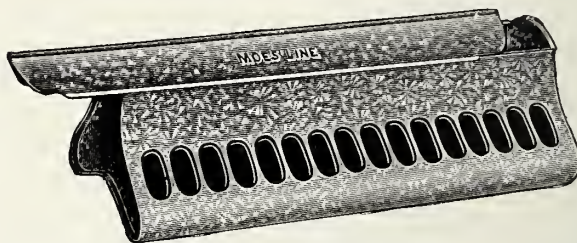
We carry a complete line and our stock is always fresh. See pages 202 to 205.

Adjustable Dry-Mash Feeder



"One feeder does the work of three." It is just as practical for the growing flock and matured fowls as for the baby chicks. A handy quick adjustment makes this possible. Made of heavy galvanized iron; adjustable steel legs. Feeds from both sides—has 5 feet of feeding-space. Holds more than a bushel. No. 35, \$4.95.

Moe's Large Capacity Feeder



A satisfactory Feeder for pigeons and young growing stock. The birds cannot roost on the cover or sides. Made of heavy galvanized iron.

Shipped completely assembled, ready for use.

		Post-paid
No. 140.	21 in. long; 8½ in. wide; 7 in. high. Capacity 10 qts. 16 openings on each side.....	\$1 00 \$1 15
No. 141.	35 in. long; 8½ in. wide; 7 in. high. Capacity 17 qts. 27 openings on each side.....	1 50 1 70
No. 141T.	Same as No. 141, except has tilting or swinging top so that chickens cannot perch on it.	1 75 1 95
No. 146.	Extra Hopper to fit on top of No. 140 Feeder. 21 in. long; 4 in. wide; 4 in. high. Capacity of Hopper, 5 quarts.....	45 55
No. 148.	Extra Hopper to fit on top of No. 141 Feeder. 34½ in. long; 4 in. wide; 4 in. high. Capacity of Hopper, 9 quarts.....	65 75
* Extra Hoppers are not illustrated.		



Moe's Dry-Mash Hopper

The curved bottom of the Hopper keeps the feed within easy reach of the birds. The gradual enlargement from the top to base prevents clogging. The wire grid and the wires running from the flange through the wire grid prevent any chance of the fowls throwing out or wasting the feed. The sloping cover prevents the birds from roosting on the Hopper, and when both covers are closed, it is rat- and mouse-proof. A trial will convince you that it is a Hopper of the greatest merit. Manufactured of heavy galvanized iron in four sizes.

	Width	Capacity	Each	Postpaid
No. 35.	8½ in.	10 qts.....	\$1 50	\$1 70
No. 36.	12 in.	14 qts.....	1 70	1 90
No. 13.	18 in.	22 qts.....	2 20	2 45
No. 37.	24 in.	32 qts.....	2 60	2 85



Ideal Sanitary Fountain

Keeps water cool in summer and warm in winter

The simplest, handiest, and most practical Fountain made. Keeps water the right temperature all the year. Has no lamps to trim, or valves to get out of order. Saves time, labor, and worry, and costs nothing to run.

The Fountain is made of galvanized iron, and is similar in construction to the fireless cooker, being packed with a non-conducting material to retain the temperature of the water. The drinking cup, which contains the only water exposed, forms a connection between the outer and inner can, and does not project beyond the outer can, there being no possible chance for droppings, the cause of much disease, to get into the water.

PRICES

	Each	Postpaid		Each
2-gallon.....	\$3 50	\$3 75	5-gallon.....	\$5 00
3-gallon.....	4 00	4 25		

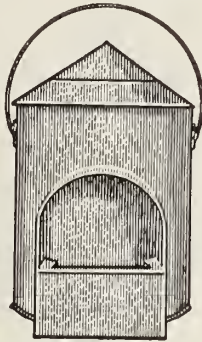
Felker's Insulated Duplex Fountain

Top Section Slides into Bottom Section

Its construction makes it as handy to clean as a common pail. The top or inside container slides into the bottom section or base, and can be removed without inconvenience at a moment's notice. The water is kept pure and clear at all times.

The extra-large opening, or drinking-trough, makes this Fountain easy of access to a number of fowls at the same time.

An entirely new and improved method of insulation enables it to keep water at an even temperature the coldest day of winter and the hottest day of summer. It will not freeze.



No.	Each	Postp'd
230. 3-gallon ..	\$4 50	\$4 85
232. 4-gallon ..	5 00	5 40

Eureka Poultry Fountain

Made of stoneware in one piece.

	Each	Doz.
1/2-gallon	\$0 50	\$5 40
1-gallon	60	6 50



Stoneware Fountains and Feeders



Sanitary Milk Feeder

Be sure to specify which is wanted, Fountains or Feeders. By freight or express only.

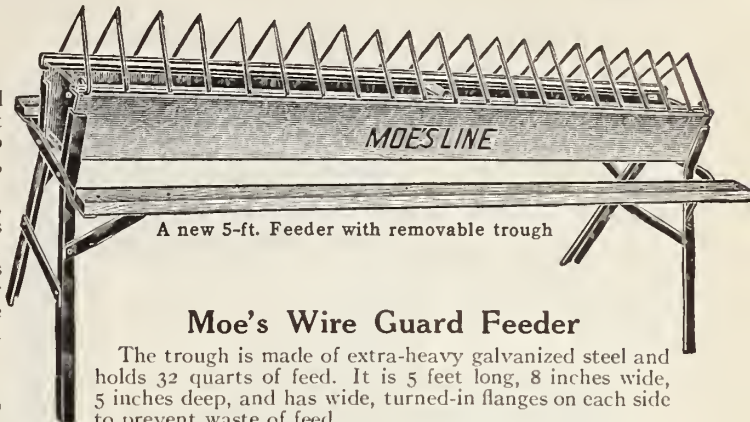


Two-piece Fountain

Made of best grade stoneware, highly glazed inside and out. Sanitary and easy to keep clean.

PRICES for Fountains or Feeders:

	Each	Doz.
1/4-gallon.....	\$0 45	\$4 85
1/2-gallon.....	50	5 40
1-gallon.....	60	6 50
2-gallon.....	1 10	12 00



A new 5-ft. Feeder with removable trough

Moe's Wire Guard Feeder

The trough is made of extra-heavy galvanized steel and holds 32 quarts of feed. It is 5 feet long, 8 inches wide, 5 inches deep, and has wide, turned-in flanges on each side to prevent waste of feed.

Wire guards are of heavy galvanized wire, correctly spaced, and electrically welded. Hinged in one unit, so the entire guard can be thrown back for filling and cleaning.

The trough rests securely on the stand, but is not bolted down and can be easily lifted off to dump and clean it, which is a highly desirable feature.

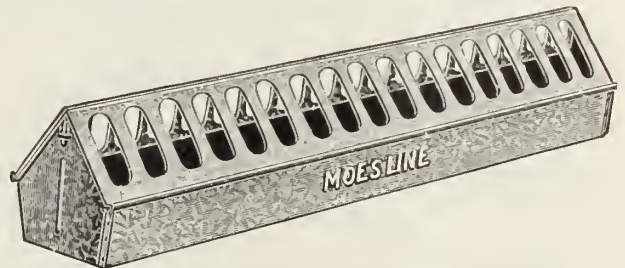
The stand has strong angle-iron legs, well braced, complete with stout wooden perches.

Total height on stand, 27 inches. Height of perches 17 inches.

No. 355. Complete with Stand and Wire Guards.....\$4 75

No. 356. Trough only, with Wire Guards (no Stand)..... 3 00

Moe's Intermediate Feeder



This Feeder is intended for growing fowl and full-grown birds, and fills the requirements of a Feeder larger than the chick sizes. Made of galvanized steel, with slotted hinged cover. Easy to fill and clean. The feeder-holes are exactly the right size and shape to give easy access to the feed and prevent waste.

Length of Feeder 32 inches, width 8 inches, depth of pan 3 1/2 inches, total height 7 inches. Capacity 12 quarts. Has a total of 34 feeder-holes, 17 on each side.

No. 154, \$1.20, postpaid \$1.35

Moe's Five-Foot Feeder

A large, practical, and economical Feeder, made of heavy galvanized steel, strongly braced and reinforced. Has special stamped galvanized steel legs, bolted to the trough, strong, substantial and will stay in position. Can be used as either a Feeder or waterer.

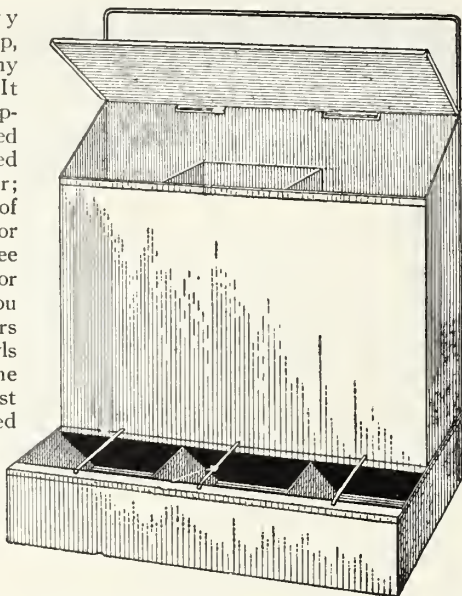
Holds 32 quarts of feed or 8 gallons of water. Can also be used with the No. 30 Automatic Valve and Float, shown on page 181, to furnish a constant supply of drinking-water. Trough has wide turned-in flange on each side to prevent the fowl from billing out and wasting the feed. Has a tilting or swinging top cover. Length of Feeder 5 ft., height 15 in., width of trough at top 8 in., depth of trough 5 in., height to top edge of trough 9 in.



No. 370, \$3.75, postpaid \$4

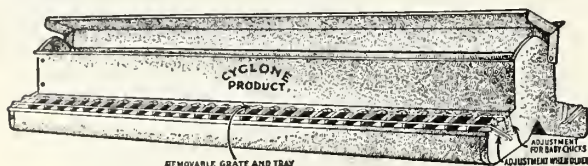
The 1—2—3 Poultry-Feeder

Used for dry mash, beef scrap, grit, shells, or any kind of dry feed. It is made with a separator. When used for one kind of feed take out separator; for two kinds of feed, put separator in one end; for three kinds put separator in center, when you have three feeders in one. The fowls cannot waste the feed. Made of best grade galvanized iron. Capacity, 9 quarts. No. 312, \$1.35, postpaid \$1.55.



The 1—2—3 Shell, Grit, and Charcoal Feeder

A very convenient size for a pen of fowls. Will serve for one, two or three kinds of feed by using the separator. Holds about 3 quarts. Same design as the 1—2—3 Poultry Feeder. No. 310, 75 cts., postpaid 85 cts.



"Cyclone" Dependable Chick-Feeder

A FEEDER IN A CLASS BY ITSELF

The Cyclone Dependable Feeder is true to its name, dependable, and is built for service, having entirely new and valuable working features. It will accommodate the chicks from the very start.

The cover is hinged and provided with no roost contrivance. Filling is easy with the Dependable. No more space is required for filling than that taken up by Feeder.

The feed-grates are formed into feed-saving trays and are easily removed. All openings have smooth, turned edges. Has adjustable feed-saving guards.

Made of galvanized iron, and fastened together with rivets.

	Capacity	Length	Price	Postpaid
No. 220.	8 qts.	20 inches.....	\$1 00	\$1 15
No. 230.	12 qts.	30 inches.....	1 50	1 70
No. 240.	16 qts.	40 inches.....	1 95	2 20

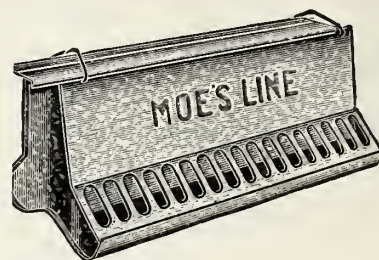


Nu-Way Feeder and Fountain

The modern sanitary way of supplying grown fowls, turkeys, and pigeons with water, buttermilk, wet mash, and feeds of every kind without waste. The pan or vessel is made of stoneware and the canopy of heavy galvanized iron. The wires are No. 11 gauge galvanized wire, every joint electrically welded.

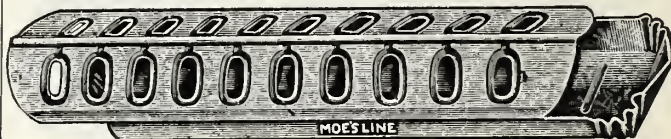
	Diam.	Height	Capacity	Feeding spaces	Each	Postpaid
No. 1.	12 in.	13 in.	6 qts.	17.....	\$1 50	\$1 70
No. 3.	16 in.	16 in.	13 qts.	23.....	2 25	2 50

Moe's Big Boy Feeder



Especially designed for growing stock—three- to four-week-old chicks—and up to full-grown, mature fowls. Has a large capacity, with wide, good sized feeder openings, the edges of which are rounded over perfectly smooth, so that large head birds cannot injure their combs. Makes an excellent feeder for turkeys. The feeder-holes are exactly the right shape and size to prevent waste, and yet give easy access to a generous supply at all times. Has a capacity of about 75 pounds or 65 quarts of dry mash, with 17 openings on each side or a total of 34 openings. Can be placed on the ground or on a low stand or suspended by the two wire handles.

No. 160. Length 33 in., width 16½ in., height 14 in. \$3 50
No. 161. Same Feeder, with Adjustable Rain-Cover. 4 25



Moe's Eclipse Feeding-Troughs

A new popular-priced Feeding-Trough, made of galvanized iron and intended for chicks and growing stock. The pan and top are both stamped in one piece, no seams, rivets or solder used. Sliding top makes them easy to fill and keep clean. Made in two sizes.

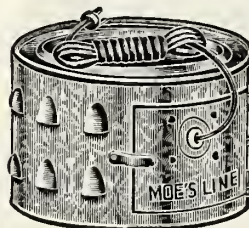
	Length	Each	Postpaid	Doz.	Postpaid
No. 27.	10 inches.....	\$0 20	\$0 30	\$2 15	\$2 35
No. 28.	20 inches.....	25	35	2 70	2 95

Moe's Magazine Chick-Feeder and Waterer

A new round Chick-Feeder with a magazine or container to hold a good quantity of feed. The upper magazine is fitted to the Feeder top with a spiral thread so it can be adjusted up or down to feed the various kinds of grain. It can also be used as a drinking-fountain, as the magazine is water- and air-tight.

Diameter of Feeder 8¼ inches. Capacity 2 quarts. Height 8½ in.

No. 18. Moe's Chick-Feeder. Each 50 cts., postpaid 60 cts.



Moe's Electric Fountain and Brooder Heater

An efficient, durable Electric Heater which can be used under any suitable water fountain, to prevent freezing.

Made of heavy, galvanized steel and equipped with a porcelain insulated heating unit. Fitted with a rubber-covered cord with attachment plug, and connects to an ordinary light-socket. Electric consumption about equal to 80-watt lamp. Regularly furnished for 110-volt light circuit, but can also be supplied for 220-volt, or 32-volt farm light circuit. Diameter 11 inches; height 7 inches. No. 436, \$3, postpaid \$3.20.

Moe's Round Baby Chick-Feeder



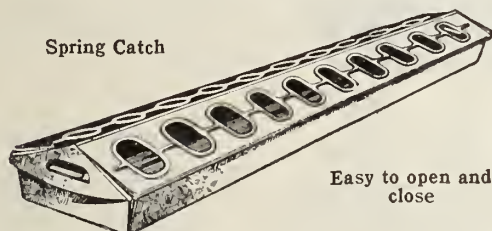
Popular and practical Feeder for baby chicks. Made of best-quality, tight-coated galvanized steel, accurately formed with dies, with smooth, round feeder-holes. The top fits snugly on the pan, but can be easily lifted off for cleaning and filling.

The holes are just the right size to make feeding easy, but the chicks cannot get inside and contaminate the grain. The bottom pans are raised in the center so the feed is all accessible. Can also be used for water. Made in two sizes.

	Each	Postpaid	Doz.	Ppd.
No. 11. 8 feeder-holes.....	\$0 10	\$0 20	\$1 05	\$1 20
No. 12. 12 feeder-holes.....	20	30	2 15	2 35
No. 12. Porcelain Enameled...	75	85		

Stand 1 $\frac{3}{4}$ in. high, to raise feeder out of litter, 5 cts. extra.

Spring-Catch-Cover Chick-Troughs



This new spring-catch flat bottom Trough is stamped into shape with dies, as shown in cut, thus making it strong and substantial as it has no soldered seams. The cover is fastened to the Trough by means of a spring catch, which makes the Trough as easy to open and close as a watch-case.

These Troughs are made in two lengths. The No. 11 has ten holes and the No. 21 has twenty holes.

	Each	Postpaid	Doz.	Ppd.
No. 11. 10 inches long.....	\$0 15	\$0 25	\$1 65	\$1 85
No. 21. 20 inches long.....	25	35	2 70	2 95

Moe's Grit and Shell Box

The feeding of grit, ground shells, and charcoal is now recognized as an essential part of the diet, to keep fowls in healthy, prime condition. There is no more economical method of supplying grit, etc., than with these practical, inexpensive compartment boxes.

Can also be used as feed-hoppers for little chicks.

Made of heavy galvanized iron in three sizes. The No. 45 for baby chicks has a square bottom, the other sizes have round bottoms. No solder used in their construction.



PRICES

	Compartment	Width	Each	Postpaid
No. 45.	2	5 in.	\$0 40	\$0 50
No. 9.	3	8 $\frac{1}{2}$ in.	75	90
No. 90.	4	11 in.	1 00	1 15

Moe's Improved Double Chick-Feeders

Sliding top



Easy to fill and clean

An excellent trough for feeding chicks. Made of best-quality galvanized steel, accurately stamped and formed with dies. Smooth, turned-over edges on all the feeder-holes, so there are no sharp or rough edges to injure the chicks. Width of pan, 4 inches; depth at outer edge, 1 inch; total height, 3 inches.

	Length	Feeder-holes	Each	Postpaid	Doz.	Postpaid
No. 58.	12 in.	18.....	\$0 25	\$0 35	\$2 70	\$2 95
No. 59.	18 in.	26.....	35	45	3 80	4 10
No. 60.	24 in.	36.....	45	55	4 85	5 20
No. 76.	36 in.	54.....	60	75	6 50	6 95

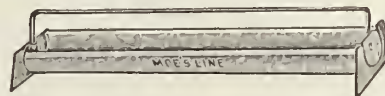


Felker's Chick-Feeder

A large-capacity Chick-Feeder for use throughout the growing season. It is well made and easy to clean. Comes completely assembled, ready for use.

	Length	Each	Postpaid	Doz.	Postpaid
No. 328.	30 in.	\$0 50	\$0 60	\$5 40	\$5 65
No. 330.	60 in.	1 00	1 15	10 80	

Moe's Dixie Feeding-Troughs

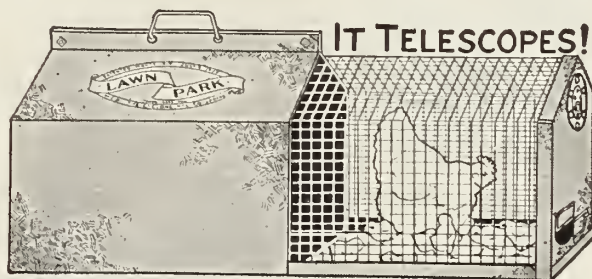


Made of best-quality galvanized steel. The round Troughs are easily filled and cleaned, and have a turned-in flange to prevent waste of feed. Fitted with a heavy wire top guard to keep the chicks out of the feeder, and this guard is adjustable so it can be raised as the chicks grow.

	Each	Postpaid	Doz.	Postpaid
No. 460. 18 inches long.....	\$0 20	\$0 30	\$2 15	\$2 35
No. 462. 30 inches long.....	30	40	3 25	3 50

The LAWN PARK Brood Coop

SAVES THE CHICKS



IT TELESCOPES!

Patented May 13, 1919

It is made entirely of galvanized materials, will not rust, and absolutely protects chicks against rats, cats, dogs, hawks, vermin, cold, storms, and all other chick enemies. The main part of the Coop is made from heavy galvanized steel, while the Park is made from strong galvanized wire screen, which has the edges neatly bound and strongly reinforced with galvanized steel. The Lawn Park is large and roomy, being 18 inches wide, 19 $\frac{1}{2}$ inches high, and 48 inches long, with Park extended. The Coop and the Park are of equal length. The Park permits the chicks to have plenty of sunshine and fresh air, and also allows them to range on grass. Coop has removable bottom for quick and easy cleaning. Price \$3.60 each, 3 for \$9.95.

Moe's Gem Chick Fountains



A good, inexpensive Fountain for chicks or grown fowl. Made of galvanized steel, accurately stamped and formed. Easy to fill and clean. The fluted pan is shaped to care for up to 18 chicks at a time without crowding or danger of getting the chicks wet. Diameter of pan, 10 inches. Has a substantial top handle for carrying, and may be placed on the floor or hung from the ceiling up out of the litter as desired.

	Capacity	Each	Postpaid
No. 158.	1-gal.	\$0 55	\$0 65
No. 159.	2-gals.	75	90

Moe's Feed and Water Cups

A practical and convenient Cup made to hang on the side of exhibition coops. Capacity about $\frac{1}{2}$ pint.

Length, 4 $\frac{1}{2}$ inches; width, 3 inches; depth, 2 inches.

No. 61. 15 cts. each, postpaid 20 cts.; doz. \$1.65, postpaid \$1.90.



Kline Glass Jar Fountain

Pan made of heavy, clear glass. The jar-holder is made of steel and snaps onto the pan. Easy to fill and clean. Will fit any Mason jar. (Jar not furnished.) Can be used for buttermilk or medicines as well as water.

No. 10. 15 cts. each, postpaid 20 cts.; doz. \$1.65, postpaid \$1.85.



Moe's Adjustable Roof Saddle

Made of galvanized iron and adjustable to any required angle from an almost flat roof to one-half pitch. Quickly adjusted and locked rigidly in the desired position.

Size of flat roof flange 14 by 18 inches and made in two sizes for 4 and 5-inch brooder pipe. The small end of regular pipe is slipped underneath the Saddle, and as many lengths of pipe as desired can be placed on top of the Saddle.

	Each	Postpaid
No. 440. For 4-inch pipe.	\$1 50	\$1 60
No. 441. For 5-inch pipe.	1 65	1 75

Smoke-Pipe Top Cap

Chimney Cap for brooder stove-pipe. Made of galvanized steel, to slip on the top of regular pipe. Keeps out rain and snow and improves the draft. Easy to install; no tools or bolts required.

	Each	Postpaid
No. 444. For 4-inch pipe.	\$0 40	\$0 50
No. 445. For 5-inch pipe.	45	55



Smoke-Pipe for Brooder Stoves

Blue Steel in 2-ft. lengths, 4-in. diam., 18 cts. per length; postpaid, 23 cts. 5-in. diam., 20 cts. per length; postpaid, 25 cts. Cast-Iron Dampers. For 4-in. pipe, 15 cts. each; for 5-in. pipe, 17 cts. each.

Elbows, Crimped. 4-in. diam., 15 cts. each; postpaid, 18 cts. each. 5-in. diam., 17 cts. each; postpaid, 20 cts. each.

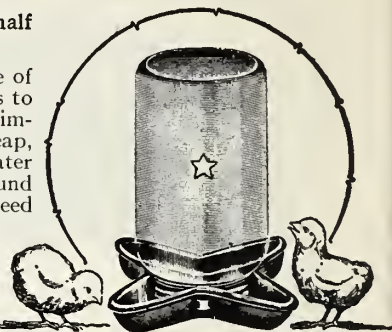
The Star Jar Fountain and Feeder

Will fit pint, quart or one-half gallon Mason jar

Manufactured of one piece of non-rusting metal. No parts to come unsoldered. Leaking impossible. Convenient, cheap, and sanitary. Provides greater drinking surface than the round fountain. Can be used for feed as well as water.

Price, without Jars, 10 cts. each, postpaid 15 cts.; doz. \$1.10, postpaid \$1.30.

Stand 1 $\frac{3}{4}$ in. high, to raise fountain out of litter, 5 cts. extra.



Moe's Mason Jar Fountain

Made of heavy terne plate, a rust-resisting metal, and the finest Fountain of its kind on the market. No solder used in its construction. Can be used for feed as well as water. Little chicks cannot drown. Will fit pint, quart, or 2-quart Mason jar. (Glass jars not furnished.) Diameter 6 inches.

No. 142. 10 cts. each, postpaid 15 cts.; doz. \$1.10, postpaid \$1.20.

Stand 1 $\frac{3}{4}$ in. high, to raise fountain out of litter, 5 cts. extra



Stoneware Chick Fountain

To be used with any make of fruit jar

A PERFECT FEEDER

For sour milk, water, hard grain or grit

Can be used for feeding buttermilk or medicines without fear of any chemical reaction. The one-piece bracket holds the jar firmly. Fits any Mason jar.

No. 9. Pan and Bracket only. 15 cts. each, postpaid 20 cts.; doz. \$1.60, postpaid \$1.80.



MaKomb 10-Qt. Chick-Fount

A top-fill Fountain of most practical design. It provides for baby chicks a dependable supply of clean water. It has every advantage and most convenient to take care of. Built of heavy-gauge galvanized steel. The removable non-roosting cone top comes off for easy filling. Handle provides for easy handling. Float can be locked to prevent flow.

No. 1. 10-qt. \$1.65, postpaid \$1.80; $\frac{1}{2}$ doz. \$8.90.



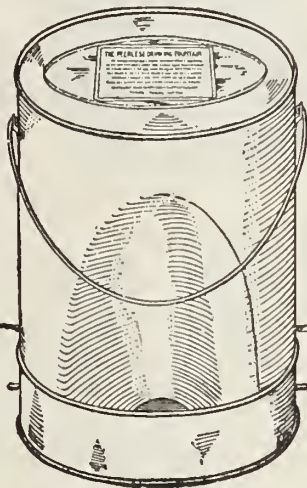
Moe's Top-Fill Cleanable Fountain



An inexpensive, cleanable Fountain, with round drinking-pan. Suitable for chicks or grown fowl. Made of galvanized steel. Easy to fill and clean. The water feeds automatically; no valves or complicated parts. Has a substantial side fastener so can be hung on the wall if desired. The pan is 11 1/2 inches in diameter, giving a large drinking surface. Has a capacity of 2 gallons and is a good Fountain of this type at a low price. No. 40. Height 14 in. \$1.75, postpaid \$1.90.

The Peerless Sanitary Drinking Fountain

The water is always pure, as it is protected from dirt and filth. The fowls cannot injure their combs when drinking; easy to clean and fill; simple in construction; durable and practical. It is adjustable; the top and bottom can always be made to fit. Should it work too loose, take the Fountain apart and pull sides out; if too tight, press sides in. Made of heavy galvanized iron.



Patented January 18, 1910

	Each	Postpaid
No. 206. 5-qt....	\$0 90	\$1 05
No. 208. 10-qt....	1 25	1 50

Lectro-Warm Electric Fountain Heater



Keeps drinking-water from freezing, even in zero weather. Used with any type fountain, pan, crock, or bucket. Heater is 8 inches in diameter, 1 1/2 inches high, and made of heavy galvanized metal. Built for service. Can be used satisfactorily for a heater in a small home-made brooder, also oats sprouter. When ordering, state voltage of your electric current. \$2.50 each, postpaid \$2.60.



Little Putnam Stove

The Little Putnam Stove is used under the drinking vessel in the poultry-house to keep the water from freezing during the winter months. It is 8 inches in diameter and 4 inches high and is made of galvanized iron and equipped with burner. The oil tank holds three pints of oil and burns three to four weeks without refilling or any other attention. The wick never needs trimming. \$2 postpaid.



Moe's Bottom-Fill Fountain

The chicks cannot get into the basin to foul the water nor to drown, and will not roost on the top. They are easily cleaned, light and durable. The round taper shape prevents bursting from freezing.

	Each	Postpaid
No. 19. 1-qt.....	\$0 25	\$0 35
No. 20. 2-qt.....	30	40
No. 24. 1-gal.....	45	60

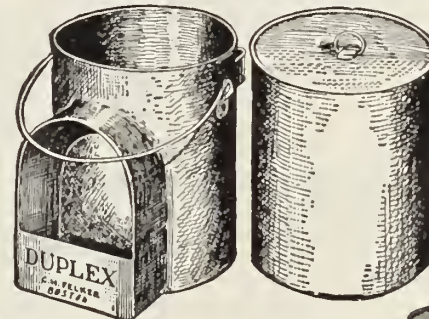
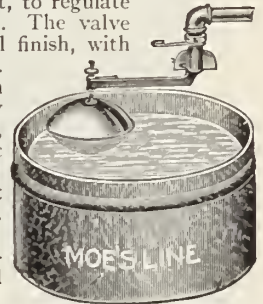
Moe's Automatic Poultry Fountain

A perfect automatic valve and float, to regulate the flow of water to a drinking-dish. The valve mechanism is entirely of brass, nickel finish, with nothing about it to rust or clog up.

The valve is threaded for 1/4-inch iron pipe and can be attached to any iron water pipe, or to a barrel or tank, and insures a continuous, automatic supply of water, without waste.

No. 30. Automatic Valve and Float only. \$1, postpaid \$1.10; doz. \$10.75, postpaid \$10.95.

No. 31A. Automatic Valve and Pan complete, as illustrated, \$1.50, postpaid \$1.65. Doz. \$16, postpaid \$16.40.



Duplex Fountain

An ideal Fountain for pigeons. Practical; sanitary. A double-wall fount, keeping the water clean and pure. Easy to fill. Easy to care for.

	Each	Postpaid
No. 210. 1-gal.....	\$1 15	\$1 30
No. 212. 2-gal.....	1 40	1 65

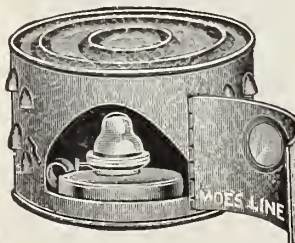
Twin Duplex Fountain

Constructed with two water-fronts which doubles the drinking capacity.

	Each	Postpaid
No. 214. 2-gal.....	\$1 65	\$1 90
No. 216. 5-gal.....	3 00	

Two-Pen Duplex Fountain

Made with two water-fronts. Similar to Twin Duplex Fountain except water-fronts are opposite each other. (Not illustrated.) Same price as Twin Duplex Fountain.



Moe's Fountain Heater

Can be used with all styles of fountains, and effectively prevents water from freezing.

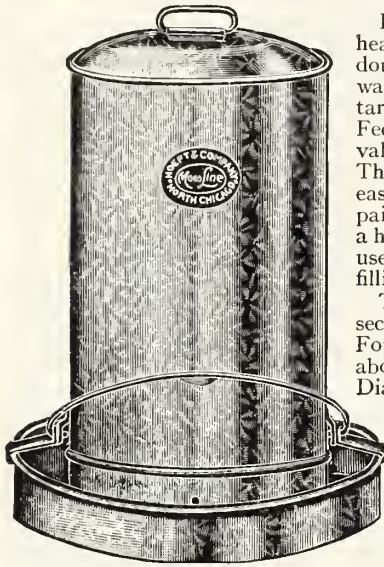
Effectively solves the problem of a uniform supply of fresh, clear water at all times, no matter how cold the weather.

It is also an excellent heater for small brooder.

The lamp fount or bowl holds sufficient kerosene to burn continuously for seven days. Height 7 in.; diam. 11 in.

No. 10. Each \$1.90, postpaid \$2

Moe's Top-Fill Fountain with Round Pans



Fills from the top. Made of heavy galvanized steel, with double walls, which keeps the water cool in summer and retards freezing in winter. Feeds automatically; no valves to get out of order. Thoroughly sanitary and as easily cleaned as an ordinary pail. The outside cover has a heavy wire bail, so it can be used to carry water when filling the inside tank.

The side clips hold the pan securely in place when the Fountain is lifted or carried about by the top handle. Diameter of pans 13 inches.

Fill the Fountain in the morning and the chickens have an all-day's supply of pure water at just the right temperature.

	Each	Postpaid
No. 33. 2-gal.	\$2 10	\$2 30
No. 34. 4-gal.	2 60	2 80

Moe's Top-Fill Fountain with Square Pans

Made similar to the Top-Fill Fountain described above, except it has square drinking-pans which gives drinking facilities for two pens at the same time.

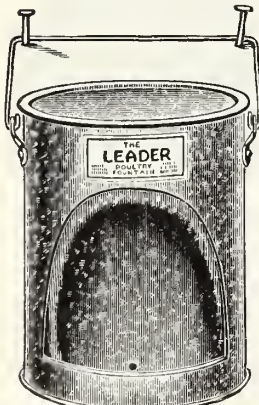
	Each	Postpaid
No. 1. 1-gal.	\$1 35	\$1 50
No. 2. 2-gal.	2 10	2 30
No. 4. 4-gal.	2 60	2 80

Moe's Top-Fill Heated Fountain

A very practical lamp-heated Fountain. The outfit consists of either the No. 33 Moe's 2-gallon Fountain or the No. 34 Moe's 4-gallon Fountain described above and the No. 10 Moe's Fountain Heater described on page 181.

	Each	Postpaid
No. 417. 2-gal.	\$4 00	\$4 25
No. 418. 4-gal.	4 50	4 80

Leader Fountains



Pat. applied for
No. 200. 1 1/2-gal. size,
85 cts.; postpaid \$1



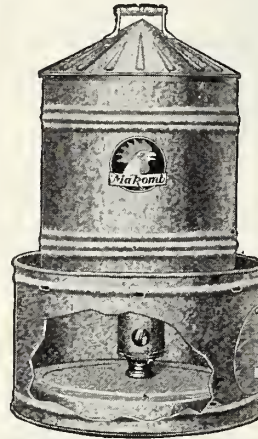
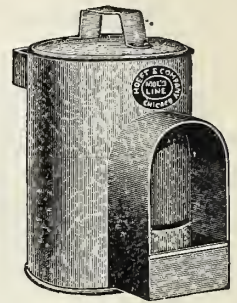
Pat. applied for
No. 202. 3-gal. size,
\$1.50; postpaid \$1.70

A new sanitary Fountain, practical to use, easy to keep clean. A saving of from 30 to 40 per cent over any Fountain of its size. The 3-gallon size has two drinking-spaces, making it very convenient for a large pen of fowls. These founts hang on the wall with two nails, one at each angle of the bail.

Moe's Improved Wall Fountains

Made of heavy galvanized iron, in two sizes. The covered outlet keeps out dust and dirt, and the outlet is further protected by a removable plate which prevents any floating rubbish from being drawn into the reservoir.

	Each	Postpaid
No. 98. 1-gal.	\$1 00	\$1 15
No. 99. 2-gal.	1 40	1 60



The MaKomb Vacuum Fountain

This Fountain is constructed entirely of copper-bearing steel. To fill it, simply draw off the outer can. A new shut-off valve positively prevents flow while outer can is removed. It is easy to clean and sanitary. Cone-top prevents roosting.

The trough is 14 inches in diameter, and amply wide, with full rolled edge. Equipped with lamp and chimney. Oil-bowl holds 7 pints of oil, sufficient for three weeks' operation. No. 66. 6-gal., \$4.25.

The MaKomb Float Fountain

Similar in design to the No. 66 Fountain illustrated above, except the water-flow is controlled by a copper float. Lamp Heater has No. 2 Burner and Chimney. Oil-bowl holds 10 pints of oil. No. 710. 10-gal., \$7.50.

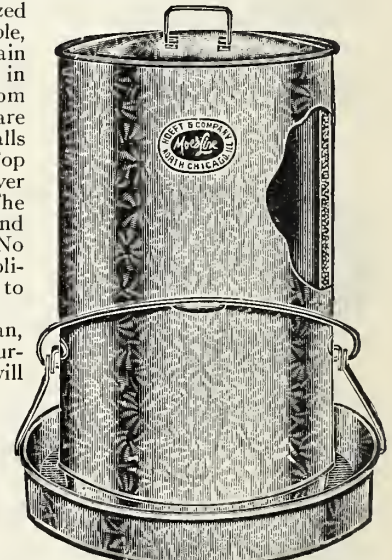
Moe's Insulated Cleanable Fountain

Made of heavy galvanized steel, substantial and durable, and is an excellent Fountain for winter and summer use in any climate. The bottom pan, side walls, and top are all made with double walls filled with insulation. Top section telescopes snugly over the water-container. The Fountain is as easy to fill and clean as an ordinary pail. No valves, springs, or complicated parts, and nothing to get out of order.

Has a large, round pan, giving a large drinking-surface, so one Fountain will care for a good-sized flock. The pan is held securely in place so the entire Fountain can be lifted by the top handle and carried about as desired without spilling any water.

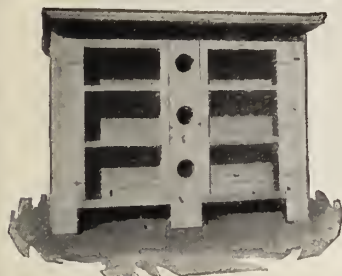
In winter, fill with hot water and place in the poultry-house. The hot water thoroughly heats the insulated walls, so freezing is retarded. The Fountain should be emptied at night and refilled each morning.

In summer, fill with cool water, place in shady spot, and the water will remain cool and fresh all day.
No. 54. Capacity 4 gal. Diam. of pan 14 in. Total height 17 1/2 in. \$4.50, postpaid \$4.80.



Rabbit Supplies

For many years we have catered to the rabbit breeder and fancier in a small way. With the increasing interest in the rabbit industry, we have enlarged our line and are now prepared to supply every requirement to those raising rabbits. It has been our aim to make our line complete and to supply only those necessities which the experience of our customers and ourselves has shown to be practical and most profitable. It will be a pleasure to serve you.



6-Pen Outdoor Hutch

6-Pen Outdoor Hutch, Complete	\$24 75
6-Pen Additional Units (without one end)	23 50
6-Pen Indoor Hutch, Complete	22 00
4-Pen Outdoor Hutch, Complete	18 50

Stoneware Feeders and Waterers

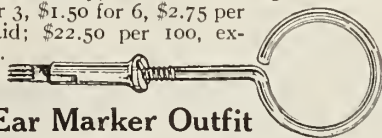
Made with heavy rolled edge to prevent waste of feed. White glazed.

- No. 031. 2½-in. deep x 7¼-in. diam., 20c. ea., \$2.15 per doz.
 No. 041. 2½-in. deep x 5½-in. diam., 15 cts. each, \$1.65 per doz.
 No. 051. 2½-in. deep x 6-in. diam. at top x 7½-in. diam. at bottom, 20 cts. each, \$2.15 per doz.
 No. 021. 3½-in. deep x 6-in. diam., 20 cts. each, \$2.15 per doz.



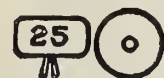
Ex-Cel-So Fur Stretcher

In order to dry, stretch, and properly prepare the hides for tanning it is necessary to have a Fur Stretcher. The Ex-Cel-So is made of heavy spring steel in one size only, suitable for large or small hides. \$1 for 3, \$1.50 for 6, \$2.75 per doz., postpaid; \$22.50 per 100, express collect.



Ex-Cel-So Ear Marker Outfit

A reliable, adjustable, tattoo Ear Marker. Positive and quick identity of every rabbit. The Marker is adjustable, suitable for making any figures or letters. Marker complete with ink and directions how to use \$1, postpaid \$1.10.



Ex-Cel-So Aluminum Ear Tags

Another means of identifying the individual rabbit or other small animal, used in place of the ink-marker. A hole is punched into the ear of the animal, the Tag is then inserted, clasped onto a washer and all is done. Numbered from 1 to 200. 25 cts. for 12, 50 cts. for 25, 75 cts. for 50, \$1.35 per 100, postpaid. Ear Punch, 15 cts.

Hardware Cloth

5/8 x 5/8-in. mesh, No. 16 gauge wire, galvanized after weaving. 30-in. width. Used for hutch floors. 100 lineal foot roll \$17, 25 lineal foot roll \$4.50; smaller quantities, 20 cts. per lineal foot.

Rabbit Books

Making a Living with Rabbits. 96 pages. 50 cts.
 Principles of Fur Farming. 160 pages. Cloth, \$1.50.
 Care and Management of Rabbits. By Chesla C. Sherlock. \$1.25.
 American Rabbit Culture. By A. E. Facey, Jr. \$1.
 Pedigree Book. 50 blanks bound in book form. 35 cts.
 Pedigree Blanks. 25 blanks 30 cts.; 50 blanks 50 cts.

Root Ready-Built Rabbit Hutches

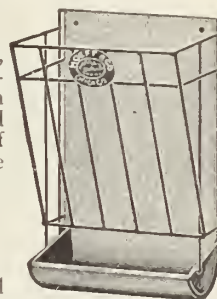
The Root Hutch answers the need for proper housing of rabbits. It is low in price and modern in design. Rabbits are healthy in the Root Hutch because there are no drafts and it is easily kept clean and sanitary. This Hutch saves feed and requires very little work because it is self-cleaning. Root Hutches are made of western fir and white pine. All hardware good quality. Built strong and sturdy throughout. All Hutches are 8 feet long and 28½ inches wide. The 6-pen Hutch is 6 feet high, the 4-pen Hutch, 5½ feet high, and the 2-pen Hutch, 52 inches high. They are equipped with the latest type self-cleaning floors. All floors are solid and tight. They slope to the rear. You have your choice of the solid wood self-cleaning floor or the part wire and wood. State the kind desired when ordering.

2-Pen Outdoor Hutch, Complete	\$11 25
Developing Pen with Nest-Box and Platform	8 75
Standard Nest-Box	1 25

Complete Catalogue on request

Moe's Rabbit Feed Rack

For holding roots or hay, alfalfa, clover, etc. It prevents scattering hay and wasting. The round trough at the bottom catches the small tender leaves. Feed saved soon pays for the Rack. Made of galvanized steel with galvanized wire rack. Height 13 in., width 8½ in.
 No. 44, 75 cts., postpaid 90 cts.



Rabbit Feeds

Domino Rabbit Pellets. A complete and balanced food ready to feed. Each ingredient is carefully selected to perform a necessary task and meet a genuine need.

Pratt's Rabbit Feed. Perfectly balanced, highly appetizing, complete feed, containing 16 ingredients. Furnished in both mash form and pellet form.

Conkey's Balanced Rabbit Feed with Y-O. A scientifically balanced feed containing 12½ per cent protein with enough animal food to support rapid bone and muscle development.

Alfalfa Hay. Fed in racks and kept before the stock at all times. The Hay we offer is green, well cured, and in perfect condition for feeding.

For prices of above, see our Poultry Feed Price-List accompanying this Catalogue

Ex-Cel-So Rabbit Remedies

Ear Canker Remedy. Eliminates ear-trouble speedily. 50 cts., postpaid 55 cts.

Cold and Pneumonia Remedy. Be prepared and keep a bottle on hand. 60 cts. and \$1, postpaid 65 cts. and \$1.10.

Pot Belly Remedy. For young stock that sometimes overeat. 50 cts., postpaid 55 cts.

Eye Drops. For treating weak and sore eyes. 50c., postpaid 55c.

Slobber Remedy. A treatment for indigestion. 50 cts., postpaid 55 cts.

Health Tonic. A preparation for all kinds of disorders in rabbits. 50 cts., postpaid 55 cts.

Tonic and Regulator. Makes small animals grow. It builds bone and muscle. 1¼-lb. pkg. \$1., postpaid \$1.10; 5-lb. pkg. \$3.50, postpaid \$3.65.

Breeding Tablets. For does that are hard to breed. 50 cts., postpaid 55 cts.

Diarrhoea Remedy. In tablet form. 50 cts., postpaid 55 cts.

Salt Spools. Keep your stock healthy and in good condition by keeping Salt Spools always before them. Prevents common disorders and disease. Two kinds: pure salt and salt with sulphur added. Either kind, 5 cts. each, 50 cts. per doz., postpaid 70 cts.; 100 for \$3.50, express collect.

Improved "Surety Cushion" Wooden Egg-Cases

Nothing like them, nothing just as good for parcel post and express shipments. Made in all sizes to hold from two dozen to thirty dozen eggs.



Patented

Light, yet strong, they are sure to carry safely, regardless of the distance. Easier and quicker to pack than the ordinary returnable cases. Will stand up under the most severe tests and pay for themselves in two or three shipments by eliminating breakage. Many successful poultrymen throughout the country are using them.

The Improved "Surety Cushion" Egg-Case is constructed of the best of planed lumber. The ends are reinforced with strips of wood fastened just above the grooved handles so as to prevent the sides from loosening. The double-jointed link hinges, riveted on the inside, allow the cover to turn back without breaking off. It also has a snap catch lock and a small hole cut in the cover and side for sealing with a wire seal.

The Improved "Surety Cushion" Cases are no heavier or larger than the ordinary returnable cases. The cost of shipping is reduced considerably by the saving in weight and bulk occasioned by the use of our improved reversible pyramid pocket trays. These trays hold each egg in a double pyramid cushion pocket, which prevents the eggs from coming in contact with one another, and also from rattling about.

The cases are also ideal for storing eggs for hatching, as the eggs may be turned from day to day merely by the turn of the case. This may be done without fear of breakage, even when the cases are only partly filled.

Empty cases may be returned to the shipper for 15 cents apiece for any distance. Ask your local express office for further particulars.

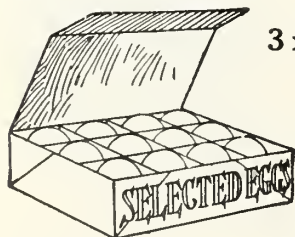
The "Surety" Trays may be used repeatedly and usually last as long as the cases, but if by chance they are broken, extra trays may be purchased separately.

All cases metal strapped.

PRICES AND AVERAGE WEIGHT

	Without Eggs	Each	Postpaid
2-dozen size....	6 lbs.	\$2 00	\$2 15
4-dozen size....	7 3/8 lbs.	2 25	2 40
5-dozen size....	8 lbs.	2 35	2 50
6-dozen size....	8 1/2 lbs.	2 50	2 65
8-dozen size....	9 1/2 lbs.	2 80	3 00
10-dozen size....	10 3/4 lbs.	3 05	3 25
12-dozen size....	12 1/2 lbs.	3 35	3 55
15-dozen size....	14 lbs.	3 60	3 85
30-dozen size....	25 lbs.	5 25	

Extra trays 24-25-egg size (for 2-, 4-, 6-, 8-, and 12-dozen size cases), 15 cts. per tray; 30-egg size (for 5-, 10-, 15-, and 30-dozen size cases), 18 cts. per tray.



3 x 4 Folding Egg Cartons

One-dozen size. No printing

This is the regulation Folding Egg Carton, used where eggs are delivered direct to customers. It is not a parcel post box. They are also used as fillers for the Successful Handy Egg Crate.

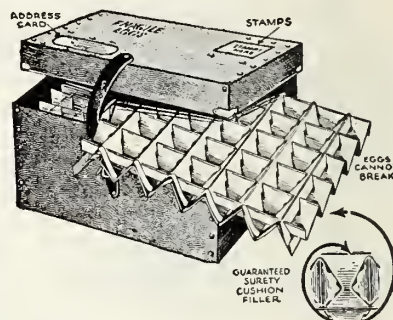
PRICES

	Postpaid		Postpaid
12 Boxes.....	\$0 25	250 Boxes....	\$2 10
50 Boxes.....	60	500 Boxes....	3 65
100 Boxes.....	1 10	1000 Boxes....	6 25

"Egg-Pak" Fibre Egg-Case

ELIMINATES ALL EGG-BREAKAGE

Made of indestructible fibre, riveted together like steel girders. It cannot break or dent. Stand on it and see. Eggs shipped in "Egg-Pak" will always arrive in the same condition in which they left. Patented reversible address card holder and stamp space makes "Egg-Pak" intermailable.



The patented "Surety Cushion" fillers in "Egg-Pak" hold any size egg separately in a cushion compartment. It cannot touch anything solid, cannot touch the egg above or the egg below, no matter how "Egg-Pak" is knocked around. No corrugated board or wrapping is needed between layers.

Easily closed by the use of a genuine cowhide strap and buckle-piece. May be sealed through buckle, if required. Buckle cannot open in transit.

The "Egg-Pak" is constructed of genuine indestructible fibre, well reinforced to stand any abuse and rough handling. Cannot break or dent and lose its shape. The only case of its kind made so durable and strong. Hinged cover opens and closes easily.

Endorsed by all agricultural colleges and agricultural agents.

PRICES AND WEIGHT

	Weight with Fillers	Price	Postpaid
2-dozen size.....	2 lbs.	\$1 80	\$1 88
4-dozen size.....	3 lbs.	2 35	2 44
6-dozen size.....	3 1/2 lbs.	2 60	2 70
8-dozen size.....	4 3/4 lbs.	2 95	3 06
10-dozen size.....	5 1/4 lbs.	3 30	3 42
12-dozen size.....	5 3/4 lbs.	3 65	3 72

Extra trays, same price as trays for "Surety Cushion" Wooden Egg-Cases

"HatchanEgg" Box

This box is so constructed with filler inserted, that it will resist crushing and blows received when in transit much better than a one-piece box or a box without a filler, such as the average box now on the market.

The Anderson "HatchanEgg" Box is designed particularly for transportation of valuable eggs for hatching. The maximum of safety is assured. "HatchanEgg" boxes are printed in two colors with forwarding and shipper's address lines.

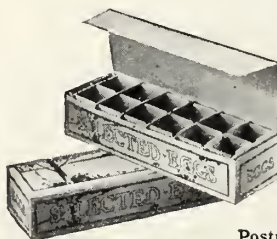


Safe and Sure

PRICES

	Each	Postpaid	Doz.	Postpaid
No. 3. Holds 15 Eggs.....	\$0 25	\$0 35	\$2 50	\$2 85
No. 4. Holds 30 Eggs.....	35	40	3 75	4 15
No. 5. Holds 50 Eggs.....	40	45	4 75	5 25

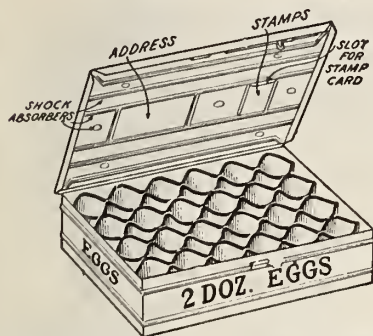
2 x 6 Folding Egg Cartons



Market your eggs in this first-class Egg Carton. Holds one dozen eggs and made with full-cushion filler, giving full protection to the eggs and long front flap, which gives a rigid top to the box. Can be used with the Successful Handy Egg Crate, Humpty Dumpty Crate, or 30-dozen regulation egg-case. Not suitable for parcel post use.

	Postpaid		Postpaid
12 Cartons.....	\$0 35	250 Cartons...	\$3 25
50 Cartons.....	1 00	500 Cartons...	6 00
100 Cartons.....	1 75	1,000 Cartons...	11 00

Aluminized Metal Egg-Crates



This is the New Model with the metal edged filler and it is a wonder. Solves every problem of shipping eggs and butter and other soft products by mail. Built for continued use; practically indestructible; lasts for years. No wrapping is required. A permanent lock pin attached to the crate holds the lid rigidly closed. Reversible address cards

are placed over eggs, address visible through opening in lid. Names of shipper and receiver are placed on each side of this card. Every user praises the New Model, with the Metal Edge Filler. Nothing better can be made to stand the jar and shocks in transit.

Any size Combination Crate desired can be supplied to carry eggs, with metal containers to hold butter, lard, sausage, honey, cut-up chicken, country sliced ham, etc. Any of these Combination Crates will be found surprisingly satisfactory. Butter, lard, and other soft products will not melt or run in warmest weather.

EGGS ONLY	Each	Postpaid	Wt. empty
1-doz. size, all eggs.....	\$1 00	\$1 08	2 lbs.
2-doz. size, all eggs.....	1 50	1 59	4 lbs.
3-doz. size, all eggs.....	1 75	1 85	4 lbs.
4-doz. size, all eggs.....	2 00	2 11	5 lbs.
6-doz. size, all eggs.....	2 50	2 62	6 lbs.
9-doz. size, all eggs.....	3 25	3 39	8 lbs.
12-doz. size, all eggs.....	4 00	4 16	10 lbs.

EGGS AND BUTTER	Each	Postpaid	Wt. empty
No. 1. 2 lbs. and 1 doz. eggs.....	1 50	1 59	3 lbs.
No. 2. 4 lbs. and 2 doz. eggs.....	2 00	2 10	4 lbs.
No. 3. 4 lbs. and 3 doz. eggs.....	2 25	2 36	5 lbs.

BUTTER ONLY	Each	Postpaid	Wt. empty
No. 4. 6 lbs. (3 2-lb. containers).....	\$2 25	\$2 34	
No. 5. 12 lbs. (3 4-lb. containers).....	2 50	2 60	
No. 6. 16 lbs. (2 8-lb. containers).....	2 50	2 60	
No. 7. 24 lbs. (2 12-lb. containers).....	3 50	3 62	



Successful Handy Egg-Crate "JUST LIKE A SUIT-CASE"

Made of galvanized iron, except the cover—will last a lifetime. Light in weight; size, 17 inches long, 8 inches wide and 13 inches deep. Holds 15 dozen eggs; has adjustable top that fits into crate any depth desired. This feature is very desirable because you can pack 1 dozen eggs as well as 15 dozen, and prevent them from rolling around and breaking—adjustable top holds them in place no matter whether the crate is one-fourth, one-half or entirely full.

The 3 x 4 Folding Egg-Cartons shown on page 184 are used as fillers for this Crate.

Crate Complete, with Fillers, \$2.25; postpaid \$2.50

Humpty Dumpty Egg-Carrier

THE BEST, CHEAPEST AND MOST CONVENIENT EGG-CARRIER IN EXISTENCE

Equipped with Safety Cushion Flats which practically eliminate breakage. No tool needed to set up these strong and durable carriers—no bothersome work in packing, and can be used over and over again.

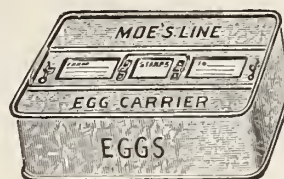
	Each	Postpaid
3-dozen size, complete with fillers.....	\$0 45	\$0 55
6-dozen size, complete with fillers.....	50	60
12-dozen size, complete with fillers.....	55	70
15-dozen size, complete with fillers.....	60	80

Extra Fillers, 5 cts. each, 50 cts. per doz.; postpaid 55 cts. Case containing 120 three-dozen size fillers and 144 flats, \$3.25.

Blue Ribbon Chick Box

A safe and convenient carrier for shipping baby chicks either by express or parcel post. Made according to Association standards and are full 5½ inches in depth. Prices include staples, ready for assembling.

	Each	Ppd.	Doz.	Ppd.
25-Chick size. 11 x 9 x 5½ in.	\$0 15	\$0 25	\$1 15	\$1 40
50-Chick size. 18 x 11 x 5½ in.	20	30	1 60	1 90
100-Chick size. 22 x 18 x 5½ in.	25	35	2 00	



Moe's Metal Egg-Carriers

Made of smooth, galvanized, sheet steel, with rounded corners, and properly constructed to absorb and resist shocks from all sides. A light, strong, and durable egg-box designed principally for safe parcel post shipments. Fitted with heavy cardboard fillers, securely protecting each egg. Reversible address cards are held firmly in the cover, for going and return address, and space for stamps. The fasteners may be sealed if desired with soft wire.

	Each	Postpaid
No. 245. 2-dozen-egg size.....	\$1 25	\$1 34
No. 246. 4-dozen-egg size.....	1 60	1 71
No. 247. 6-dozen-egg size.....	1 80	1 92

The Pittsburgh Shipping Coop



The most serviceable, sanitary, and durable Shipping Coop on the market. Made of the best galvanized steel bars and wire electrically welded together and sufficiently stayed to make it rigid throughout. The bottom is made of the best seasoned wood and is assembled by the floor-boards being stapled to three cross sections and reinforced with cleats on top.

Standard Size. 27 x 41 x 14 inches high.....	\$3 25
Turkey Size. 27 x 41 x 20 inches high.....	4 25



Humpty Dumpty

Johnson Motor Scythe

DOES ALL HAND-SCYTHE
JOBS IN LESS TIME

The Johnson Motor Scythe is adaptable for all kinds of weed- and grass-mowing, and will equal in results the work of eight men or more with hand-scythes. It will also operate easily where large cutting and mowing machines cannot go.

Because the large wheel runs free of the motor, the Scythe backs up easily, can be tilted (similar to a wheelbarrow) to cut up or down slopes, and be pivoted sharply in any desired direction.

Easy to operate around boulders, stumps, and other obstructions, and in rough places which have heretofore required costly hand-cutting.

The simplicity of construction and ease of operation of the Scythe are such that a fifteen-year-old boy can handle it.

The cutter-bar is of the standard sickle type, 36 inches long, equipped with adjustable wearing plates.

The motor is the $\frac{1}{2}$ h. p. Johnson, single cylinder, 2-cycle engine, containing no gears or valves, and a minimum of moving parts, equipped with pull starter, fuel-lift carburetor, with air-screen and muffler. The motor drives only the cutter-bar by a belt, independent of the forward movement of the entire machine. Weight, 160 pounds, counterbalanced to an operating or "lifting" weight of but 15 pounds. \$140.

Ask for a circular and demonstration



The Lyon Roost Insulator



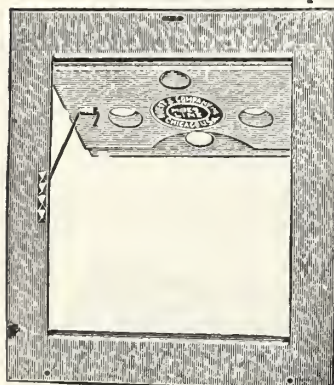
Its application is best explained as follows: An upright support, perhaps $1\frac{1}{2}$ or 2 inches square and of any desirable height, is used for each end of roosts. Holes are bored in at the top of these supports large enough to allow the Insulator to fit tight and deep enough to allow bottom of Insulator bell to rest on square top of upright.

The roost-pole is then bored to fit tight on top of Insulator and deep enough to allow it to rest on the small shoulder provided for that purpose.

The bell-shaped cup is then kept partially filled with kerosene oil which either traps and destroys the vermin or turns them back in their travels up the supports towards the roost.

One Pair.....	\$0 25	Postpaid \$0 35
Six Pairs.....	1 25	1 45

Moe's Trap Nest Front



Open

An inexpensive and useful device which meets a popular demand.

Made of best quality galvanized iron, simple in operation, with no small loose parts to get out of order.

Can be easily fitted to any orange or ordinary wood-box or coop and gives the breeder the opportunity to use a size nest best adaptable to his birds, with a uniform automatic trap feature suitable for any breed of fowl.

Effectively traps the hen, yet allows ample ventilation.

Door is hinged, making it easy to remove the hen or

clean the nest. 11 in. wide by 12 in. high. Size of opening 8 in. by 9 in.

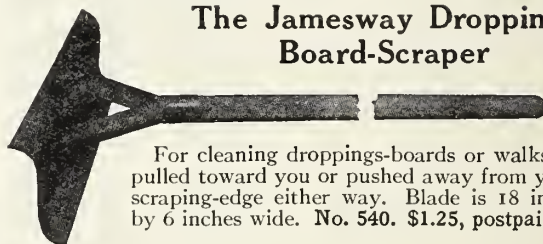
No. 63. 50c. each, postpaid 60c.; \$5.50 per doz., postpaid \$5.75.

Our Nursery Department

See pages 53 to 65

We furnish high-grade *Roses, Vines, Perennial and Rock-Garden Plants, Peonies, and Shrubs*. All of our stock is No. 1 grade and will be delivered to our customers in the best possible condition.

The Jamesway Droppings Board-Scraper



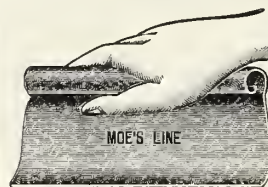
For cleaning droppings-boards or walks. Can be pulled toward you or pushed away from you. Keen scraping-edge either way. Blade is 18 inches long by 6 inches wide. No. 540. \$1.25, postpaid \$1.40.

Moe's Handled Scraper



Made of hard, stiff steel. Light in weight, yet strong and durable. The toothed or rake edge is excellent for cleaning sand or sifted ashes on drop boards. Length of blade $9\frac{1}{2}$ inches; width 4 inches; with 30-inch hardwood handle securely riveted to the blade. No. 51. Handled Scraper, 45 cts. each; postpaid, 55 cts.

Moe's Scraper and Cleaner



Made of one piece of galvanized iron. No wood handle to get loose and come off. Just the thing to get in the corners when cleaning. 10 inches long. Price 15 cts.; postpaid, 20 cts.

Jamesway Mite-Proof Roost Support



Prevents mites from reaching roosts. Fill cups with oil. Cups furnished complete with lag-screws, fillers, and dust-caps for rear support; chains and "S" hooks for supporting the front end of the roosts from the ceiling. No. 549. \$1.25 per pair, postpaid \$1.40.



CEL-O-GLASS Poultry Houses
are *Health Houses*

CEL-O-GLASS

is used for

POULTRY-HOUSES
HOG-HOUSES
COLD FRAMES
DAIRY-BARNES
BACK PORCHES
STORM-DOORS
STORM-WINDOWS
GARAGES and BARNES

CEL-O-GLASS

REG. U.S. PAT. OFF.

U.S. PATENT 1,580,287

For Health, Warmth, Light, Protection

Brings Ultra-Violet Rays Indoors

These rays keep poultry and other live-stock healthy; kill bacteria; prevent leg-weakness and the spread of disease, assure proper assimilation of the necessary bone-building minerals. Scientific tests show how Cel-o-Glass cuts down chick-losses; egg-laying records show how Cel-o-Glass increases egg-production.

In addition to its wide use in poultry-houses, Cel-o-Glass is used in hog-houses and dairy-barns; on coldframes

and hotbeds; on back porches and front porches; on storm-doors and storm-windows. See complete list of Cel-o-Glass uses at left.

Properly installed, Cel-o-Glass will last for years. The Vineland Egg-laying Contest is still using Cel-o-Glass installed five years ago. For long years of service, Cel-o-Glass should be installed on frames in a vertical position in the entire south side and other openings of all poultry-houses.

Write for Sample and Booklet

	36-in. width	28-in. width
	Postpaid	Postpaid
100-lineal-foot Roll.....	\$40 50 \$41 00	\$31 50 \$31 90
50-lineal-foot Roll.....	20 75 21 05	16 25 16 50
25-lineal-foot Roll.....	10 65 10 85	8 40 8 55

	36-in. width	28-in. width
	Postpaid	Postpaid
10 lineal feet.....	\$4 50 \$4 65	\$3 50 \$3 65
5 lineal feet.....	2 40 2 50	1 90 2 00

CEL-O-MEND. For repairing punctures in CEL-O-GLASS. 1/2 pt. 45 cts., postpaid 55 cts.; pt. 75 cts., postpaid 85 cts.

GENUINE WEATHERPROOF UNBREAKABLE FLEX-O-GLASS

Use it for poultry-house windows. Lets in the ultra-violet rays of the sun—prevents disease—promotes growth—brings winter eggs—matures chicks earlier—withstands snow, sleet, and rain—won't break or shatter. Tested and recommended by foremost agricultural authorities. Excellent for hotbeds and windows in barns. Easy to instal and will last for years.

	Postpaid
100-yard Roll.....	\$27 00 \$27 60
50-yard Roll.....	14 00 14 35
10-yard Roll.....	2 90 3 05

Less than 10 yards, 32 cts. per yard.

ASK FOR BOOKLET AND SAMPLE

Glass Cloth

MUCH CHEAPER THAN GLASS

Glass Cloth is a strong fabric treated by a patented process to make it translucent, weather-proof, and water-proof.

Glass Cloth readily transmits the life-giving vitalizing ultra-violet rays of the sun. (Glass stops them.) These are the health rays of sunlight and are absolutely needed by poultry in winter months. Glass Cloth is also the ideal material for hotbeds and coldframes.

Easily put up. Some tacks and a hammer are all you need.

IN ROLLS 36 INCHES WIDE	Postpaid
100-yard Roll, 900 square feet.....	\$30 00 \$30 60
50-yard Roll, 450 square feet.....	15 50 15 85
15-yard Roll, 135 square feet.....	4 80 5 00
10-yard Roll, 90 square feet.....	3 30 3 45
Less than 10 yards, per yard.....	35 35

BOOKLET AND SAMPLE ON REQUEST

Carbola

The Disinfecting White Paint
In Poultry-Houses, Cow-Barns, Etc.

Carbola is a white paint and powerful disinfectant combined in powder form. Simply stir the powder in a pail of water and it is ready for brush or sprayer—no waiting or straining. *Does not clog sprayer. Won't peel or flake.*

The powerful disinfectant does not evaporate but keeps its strength on the walls. Carbola will not spoil even in water and may be kept standing in pail to be used as wanted. One pound covers about 100 square feet.

Carbola is neither poisonous nor caustic—harmless to the smallest chick or stock that licks a painted surface. It gives walls and ceilings a smooth, white finish, increases the light, improves the appearance, and helps make buildings clean, sweet-smelling and free from mites and contagious disease germs. There is nothing better than Carbola for dairies, poultry-houses, cellars, dog-kennels, rabbit-hutches, garages, tree-trunks, etc.

As a Louse Powder for use on cattle, poultry, horses, hogs, dogs, etc., the dry powder will be found most satisfactory. The dry powder is applied like any other louse powder, and is very effective—a first-class louse powder at 10 cts. a pound.

	Postpaid
5 lbs.....	\$0 75 \$0 90
10 lbs.....	1 25 1 50
25 lbs.....	2 85 3 20
50 lbs.....	5 00 5 75

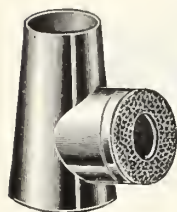


Moe's Egg-Tester

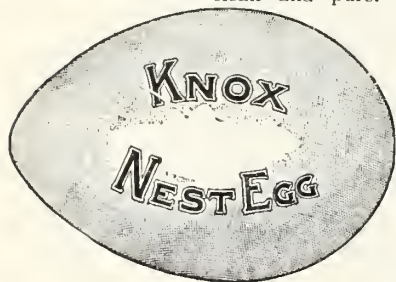
Used with an ordinary lamp (No. 2 burner) in a dark room.

It will illuminate the interior of the egg, and show if the chick is alive, and also show the size of air-cell in the egg.

No. 48. Moe's Egg-Tester. 25 cts. each; postpaid, 35 cts.

**Knox Nest-Egg**

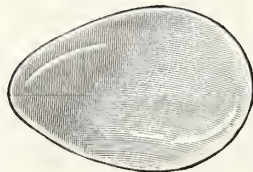
A naphthaline egg that will keep the nest clean and pure. They are also used as nest-eggs, but care should be taken not to let them come in contact with the eggs for any length of time, as the hen's eggs will become tainted. For this reason we recommend that they be put under the nesting material. Price, 7 cts. each; 4 for 25 cts. (postpaid 30 cts.); 65 cts. per doz. (postpaid 75 cts.).

**Glass Nest-Egg**

Natural in appearance and uniform in size. Will not easily break.

They induce the hen to lay where she should—in the nests provided for her.

Very popular, and the cleanest nest-egg used. Price, 3 for 10 cts.; 25 cts. per doz.; postpaid, 35 cts. per doz.

**Lime Nest-Egg**

They look like real hens' eggs. Made from pure sterilized sulphate of lime. This product is well known among poultry-raisers for its value in keeping nests in a clean, healthful condition.

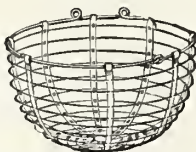
They do not break or crumble or absorb and hold the cold. Price, 3 for 10 cts.; 30 cts. per doz. Postpaid, 40 cts. per doz.

Hens' Wire Nests

Made of coppered steel wire, with flat steel ribs, and heavy top wire, all copper finish.

Provides a clean, sanitary nest for the setting hen. Easily kept free from vermin. Intended to fasten to wall with nails or screw-hooks. Can be readily changed and filled with fresh straw or hay.

No. 301. 14 in. x 7 in. \$0 25 \$0 35 \$2 90 \$3 15

**Clay Pigeon Nests**

Unglazed

9-in. diameter, 25 cts. each, doz. \$2.70. By express or freight.

**Moe's Pigeon Nests**

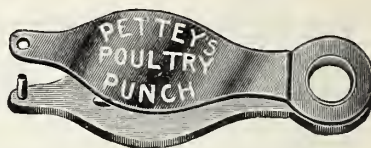
Made of galvanized iron. Diameter 8 inches, with a small hole punched in center so it can be tacked to a board. Generally used in pairs.

Light in weight, yet substantial, and easily cleaned.

No. 107. Pigeon Nests, 15 cts. each, postpaid 20 cts.; \$1.60 per doz., postpaid \$1.75.

**Petty's Perfect Poultry-Punch**

One of the best punches on the market. All steel, nickel plated, punches clean, hole is right size, will not bruise the foot. Price 15 cts., postpaid.

**Moe's Ideal Poultry-Punch**

An improved Punch, scissors type. Works easily, cuts cleanly, and does not pinch the foot.

Convenient to carry in vest-pocket and the lower end is an excellent cigar cutter.

Nickel-plated finish. Length 3 1/2 inches. No. 39. Ideal Punch Each 35 cts.; postpaid 40 cts.

**Caponizers**

Large profits await the raiser of capons. Pilling's instruments are the acknowledged leaders in this line.

New Philadelphia Caponizing Set

This set has many admirers. It consists of a knife, for making the incision; the spreader, for holding sides open; sharp hook, for piercing skin; the Lansdowne Remover, for removing the testicles. Cords with hooks are for holding the bird. Cup forceps for removing any foreign matter. Prices (postpaid), in velvet-lined case \$3.50; in pasteboard box \$3.

**Pilling Special Caponizing Set**

The finest set in the world for the price. It is used just the same as other Caponizing Sets, except that the Testicle Remover cuts, like a pair of scissors, the cord of the testicle clean and clear as a whistle. The instruments in this set are put up in oak case sent postpaid with full, easy-to-use directions on receipt of \$5, postpaid.

**Cornell Caponizing Set**

Experiments in the use of various caponizing instruments recently carried on by E. W. Benjamin, Instructor of the Department of Poultry Husbandry at Cornell University, have resulted in the manufacture by us of the Cornell Caponizing Set.

This set—two Testicle Removers, Pilling-Farmer Twisting Scoop, and Pilling-Miles Remover—sells for the reasonable price of \$6, postpaid.

**Lansdowne Caponizing Set**

Lansdowne Automatic Testicle Remover is, as its name implies, automatic, quick, easy to use, and just the remover for the beginner.

Does not have a lot of unnecessary springs which are liable to get out of order. The grasping loops are exactly same principle as the Miles Remover, which has



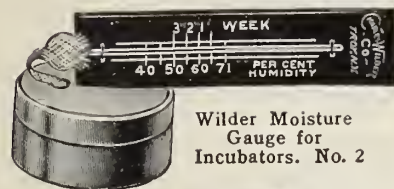
been in use for fifty years. Price \$4.50, postpaid.

Incubator and Brooder Extras

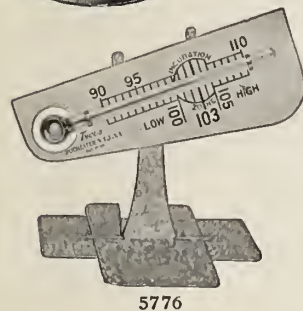
	Each	Postpaid
No. 1 Lamp Bowl, capacity 1 pt.	\$0 50	\$0 60
No. 2 Lamp Bowl, capacity 1 qt.	60	70
No. 3 Lamp Bowl, capacity 2 qts.	75	85
No. 1 Zenith Burner. Uses $\frac{5}{8}$ -inch wick.	50	55
No. 2 Zenith Burner. Uses $\frac{3}{8}$ -inch wick.	65	70
No. 3 Zenith Burner. Uses $1\frac{1}{2}$ -inch wick.	1 00	1 05
Metal Chimney.	20	25
Nos. 1 and 2 Wicks. Dozen.		30
No. 3 Wicks. Dozen.		40
Red Felt Wicks. $\frac{5}{8}$ -in. width. Dozen.		25
Red Felt Wicks. $\frac{3}{8}$ -in. width. Dozen.		45
Red Felt Wicks. $1\frac{1}{2}$ -in. width. Dozen.		55
Lamp Bowl for Buckeye Standard Incubators.	1 00	1 10
Lamp Burner for No. 65 Buckeye Incubator.	75	80
Lamp Burner for Nos. 66, 67, 68 and 69 Buckeye Incubators.	1 00	1 05
Lamp Chimney for Buckeye Standard Incubators.	50	55
Gas Burner for No. 65 Buckeye Incubator.	2 00	2 15
Wafers for Wafer Regulator, 3-in.	50	55
Wafers for Wafer Regulator, 4-in.	80	85
Wafers for Wafer Regulator, 5-in.	1 00	1 05
Wick for No. 27 Buckeye Blue Flame Brooder.	40	45
Wick for No. 28 and No. 29 Buckeye Blue Flame Brooder.	65	70

Thermometers and Hygrometers

FOR INCUBATORS AND BROODERS. ACCURATE AND DEPENDABLE



Wilder Moisture Gauge for Incubators. No. 2



5776



5792



1046



5794



1123

	Each	Postpaid
No. 5776. Tycos Incubator Thermometer, with stand.	\$0 85	\$0 95
No. 1046. Buckeye Incubator Thermometer.	75	85
No. 5794. Tycos Brooder Thermometer.	60	70
No. 5792. Tycos Brooder Thermometer.	85	95
No. 1112. Wilder Brooder Thermometer.	60	70
No. 1123. Wilder Brooder Thermometer.	90	1 00
No. 2. Wilder Moisture Gauge.	1 25	1 35
No. 5796. Tycos Incubator Hygrometer.	1 75	1 85

Books

We have books on all subjects of Gardening, Poultry Raising, Rabbits, Ducks, Turkeys, Pigeons, Dogs, and Bees. You will find them profitable reading and many of them are not expensive. See pages 206 and 207.

Bandettes (Colored Celluloid Leg-Bands)

COLORS ARE FAST AND WILL NOT FADE

Bandettes are easily and quickly applied. Simply open out band, hook it on leg, and allow it to close. Made of special spring celluloid and will close up to the original size.

Furnished in six colors—Blue, Red, Yellow, Green, Cerise (Pink), and White.

Sold only in unbroken sets of 25 of one color.



No. 4. For Baby Chicks. Numbered 1 to 500.

No. 6. For Pigeons. Numbered 1 to 500.

No. 9. For Leghorns. Numbered 1 to 3,000.

No. 11. For American Breeds. Numbered 1 to 2,000.

No. 12. For Asiatics. Numbered 1 to 500.

Nos. 4 and 6	Postpaid	Nos. 9, 11 and 12	Postpaid
25 Bands.....	\$0 35	25 Bands.....	\$0 60
50 Bands.....	65	50 Bands.....	1 00
100 Bands.....	1 20	100 Bands.....	1 80
250 Bands.....	2 80	250 Bands.....	4 35
500 Bands.....	5 25	500 Bands.....	8 50

Perfecto Spiral Leg-Bands

KNOW YOUR HENS ON SIGHT

In ten colors—Red, Green, Amber, Black, White, Pink, Yellow, Ruby, Light Blue, and Dark Blue.



Mark each bird for its pen. Give each pen a different color. Mark old birds and pullets differently and know what you are doing.

No. 1. $\frac{3}{8}$ -in. diam. for Asiatic Breeds.

No. 2. $\frac{3}{4}$ -in. diam. for American Breeds.

No. 3. $\frac{1}{2}$ -in. diam. for Leghorns, etc.

No. 4. $\frac{1}{2}$ -in. diam. for Bantams.

No. 5. $\frac{3}{8}$ -in. diam. for Pigeons.

No. 6. $\frac{1}{4}$ -in. diam. for Baby Chicks.

Spiral Leg-Band	Postpaid	Nos. 4, 5 and 6	Postpaid
Nos. 1, 2, and 3		12 Bands.....	\$0 10
12 Bands.....	\$0 15	25 Bands.....	20
25 Bands.....	30	50 Bands.....	30
50 Bands.....	50	100 Bands.....	50
100 Bands.....	75	250 Bands.....	1 75
250 Bands.....	3 25	500 Bands.....	3 00
500 Bands.....	6 00		

Colored Leader Adjustable Leg-Bands



For a general purpose band that provides quick and accurate identification, this Colored Leader cannot be equaled. It will fit anything from Bantam to Cochon, or Tom Turkey or Goose. Light in weight, but of sturdy design and construction. Continuous line of color around the band so that a bird can be distinguished, so far as brood or pen is concerned, from a distance.

A "Crackerjack" for trap nesting. Furnished in Red, Blue, Green, White, Yellow, or Pink. Not numbered above 200.

PRICES (Postpaid)

12 Bands....\$0 30	50 Bands...\$0 85	500 Bands...\$6 50
25 Bands.... 50	100 Bands... 1 50	1,000 Bands..12 50

Seamless Leg-Bands (Pigeon Sizes Only)

Our Seamless Pigeon-Bands are made of pure aluminum, well finished up, and will give satisfaction. Made in three sizes, Nos. 1, 2, and 3.

PRICES (Postpaid)

12 Bands....\$0 30	50 Bands...\$1 00	500 Bands...\$6 50
25 Bands.... 60	100 Bands... 1 50	1,000 Bands..12 50

Double Clinch Pigeon Bands



PRICES (Postpaid)

12 Bands....\$0 15	50 Bands...\$0 35	500 Bands...\$3 00
25 Bands.... 20	100 Bands... 65	1,000 Bands.. 5 50

Moe's Aluminum Leg Bands



Made of sheet aluminum, with large raised numbers, easy to read from a distance. Adjustable for any size fowl. Accurately made and quickly applied. Packed in paper cartons of 12, 25, 50 and 100 bands each. Numbered from 1 to 9999. Prices, postpaid.

No. 130—Adjustable Aluminum Leg Bands

12 bands	\$0 15	100 bands	\$0 65
25 bands	25	500 bands	3 00
50 bands	40	1000 bands	5 50

French Poultry-Killing Knife



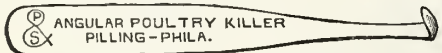
Price 60 cts., postpaid

Safe-Edge Killing Knife



Exactly same as French Killer except cut on one side only. Price 60 cts., postpaid.

Pilling Angular Poultry-Killer



Price 60 cts., postpaid

Philadelphia Gape-Worm Extractor

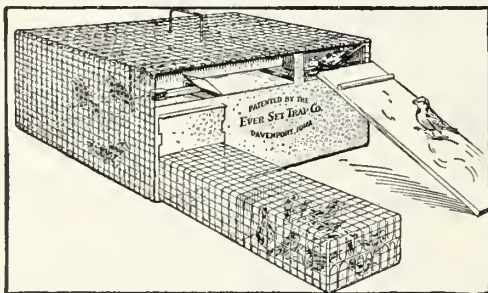


Price 30 cts., postpaid

Round Galvanized Iron Feed-Bins

These Feed-Bins are just the thing to keep your feed from rats and mice. They are 18 inches in diameter by 27 inches high and hold a 100-pound sack of feed. The lid can be used for filling the feed-hoppers. Price \$3.75.

Ever-Set Sparrow Trap



Made of 1/2-inch galvanized hardware cloth. They have been fully tried out and have caught as high as 65 sparrows in one day in summer, and 40 in one day in winter in a single trap.

Size of trap 18 x 18 x 12 inches, with 3 x 5 x 18-inch receiving-cage (for drowning), with complete instructions.

To the Farmer and Poultryman. Fifty sparrows eat daily the equivalent of a quart of wheat. Very likely you have many more than 50 sparrows fattening on the high-priced feed that you intended for your poultry. An Ever-Set Sparrow Trap, in the month of June, 1919, caught 562 English sparrows in a back yard in the city of Davenport—1,529 in five months (June to October). How much feed would these 1,529 have stolen from your poultry-yard each day? Without stopping to figure it is clear that an Ever-Set Trap pays for itself in a very short time. Price \$4.25, postpaid \$4.50.

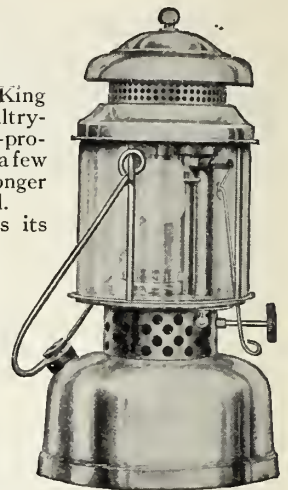
Storm King Lantern

400 CANDLE-POWER

Get more eggs by hanging a Storm King Lantern in your poultry-house. Poultrymen everywhere are increasing egg-production by using them in hen-houses a few hours each night and morning—longer feeding hours increase the egg-yield.

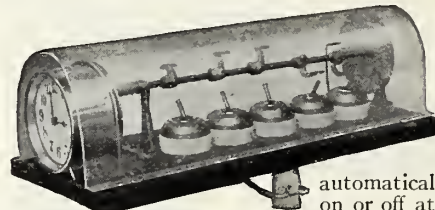
The Storm King makes and burns its own gas from common motor gasoline, giving more light than twenty oil lanterns and costing a little over a cent for three hours' use. Absolutely safe. Burns in any position and in any wind. No danger, even if tipped over. Tested by egg-producing authorities and has their unqualified approval.

Capacity of fount, 1 quart—burns 12 to 15 hours on one filling. Height 13 inches, weight 4 pounds. Equipped with Mica Chimney, 1 No. 1A Rag Mantle, and all accessories. Shipping weight, 5 pounds. Price \$6.25, postpaid \$6.50.



The NEVER-FAIL Time Switch

Changes the Hen's Habits



This simple but remarkable device automatically turns electric lights on or off at the exact time you wish it done. The hen thinks it is still daylight and keeps on working and laying, just as she did during the long summer days. You get more eggs—more profits. The Never-Fail Time Switch is simple in construction and absolutely automatic in action. Cam on a cam-shaft connected to the main spring of a clock throw the switches, turning the light on or off, bright or dim, just as you desire. The entire mechanism, clock, shaft, and switches are securely mounted on an assembly board which can be located in the home or any other building. Can be used with either direct or alternating current, with voltage ranging from 32 volts to 120 or 220 volts. Complete instructions are sent with each machine.

No. 11. Turns bright lights on or off. One operation.....	\$13 50	Postpaid \$13 75
No. 22. Turns bright lights on and off. Two operations.....	15 00	15 25
No. 33. Turns bright and dim lights on and off. Four operations.....	16 50	16 75
No. 55. Controls bright and dim lights evenings and bright lights mornings.....	18 50	18 75

The Acme Egg-Grading Scale

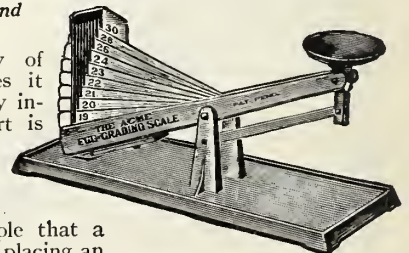
Graded Eggs Mean a Higher Market Value

Automatic, Accurate, and Convenient

It is made entirely of aluminum, which makes it rustproof and practically indestructible. Every part is accurately made and carefully tested. No springs or weights used in its construction.

This Scale is so simple that a child can operate it. By placing an egg in the cup, the beam will automatically adjust itself. The lowest visible number on the blades will indicate the weight in ounces of one dozen like eggs.

Acme Egg-Grading Scales will accurately grade all eggs ranging from 19 ounces per dozen to 30 ounces per dozen. Price \$2.85, postpaid \$3.





Conkey's

POULTRY FEEDS



Conkey's (The Original) Starting Feed with Buttermilk and Y-O

To lower mortality, encourage rapid growth, and prevent leg-weakness (rickets), use Conkey's Starting Feed with Y-O. It is high in digestible nutrients and low in fiber. The digestive organs of the chicks are, therefore, not forced to handle large quantities of feed containing waste material. Avoid untested, unbalanced so-called "cheap" feeds—they're dangerous. Use Conkey's—"It fills the bill."

Analysis: Protein 15%; Fat 4%; Fiber 5%; Nitrogen-free Extract 59%; Carbohydrates 64%.

Ingredients: Buttermilk, Cornmeal, Corn Feed-meal, Oatmeal, Wheat Middlings, 2½% Raw Bonemeal, Blood-flour, Meat-meal, Crude Milk Albumin, 1% Calcium Carbonate (source Limestone, minimum Calcium Carbonate 97%), Dried Skim-milk, ¼% Salt, Y-O (Cod-liver Oil, Yeast, Soybean Oil-meal, Wheat Middlings, ¼% red Oxide of Iron).

Conkey's Gecco Growing Mash with Y-O

If the growing pullets at any time lack vitamins A, B, and D, the result will be slow-developing, undersized birds dragging into the fall and early winter laying only a few eggs, and small ones at that. For this reason Y-O is mixed in Conkey's Gecco Growing Mash. Y-O contains cod-liver oil combined with Marmite yeast. It insures, in a potent and lasting form, the A, B, and D vitamins so necessary for the growing stock.



This mash takes the little fellows after they have had a good start and supplies the necessary materials for a strong frame and solid flesh. Don't neglect your growing stock.

Analysis: Protein 18%; Fat 5.50%; Fiber 7.50%; Nitrogen-free Extract 50%; Carbohydrates 57.50%.

Ingredients: Buttermilk, Corn Feed-meal, Wheat-bran, Wheat Middlings, Raw Bonemeal, Meat-scrap, Soybean Oil-meal, Old Process Oil-meal, Alfalfa Leaf-meal, Crude Milk Albumin, ½% Salt, Conkey's Y-O, Calcium Carbonate.

Conkey's All-Mash Chick Ration with Y-O

The All-Mash method of feeding baby chicks has been recommended by many authorities, especially among the ranks of college specialists.

The great variety of proteins in Conkey's All-Mash Chick Ration with Y-O, aids in promoting high digestibility and assimilation. This is one thing which makes Conkey's All-Mash Chick Ration with Y-O so dependable. Another very important element which this All-Mash contains, and which is not found in any other mash except Conkey's, is Conkey's Y-O.

Conkey's All-Mash Chick Ration with Y-O is recommended especially for storage brooding.

Analysis: Protein 15%; Fat 4%; Fiber 6%; Nitrogen-free Extract 58%; Carbohydrates 64%.

Ingredients: Buttermilk, Corn Feed-meal, Wheat Middlings, Crude Milk Albumin, Meat-scrap, 2½% Raw Bonemeal, Alfalfa Leaf-meal, 1% Calcium Carbonate (source Limestone, minimum Calcium Carbonate 97%), Dried Skim-milk, ¼% Salt, Y-O (Cod-liver Oil, Yeast, Soybean Oil-meal, Wheat Middlings, ¼% red Oxide of Iron).

Conkey's Gecco Egg Mash with Y-O

A High-Grade Egg Mash at a Price That Will Surprise You

This feed is wholesome grains, buttermilk, meat, and bone in precisely the right proportion to keep your flock in prime condition and at the same time make readily available each component part of the egg. Remember, properly balanced feeding is the secret of large egg-production. If your hen hasn't exactly the ingredients required, she simply won't lay. You can't beat this—it's a law of nature. Conkey's Gecco Egg Mash is the result of years of study and tests. The hens relish it and lay accordingly. With this mash give Conkey's Scratch Grains in deep litter, using about one-half as much Scratch Grain as mash. Feed Gecco! It gets most eggs at least cost.

Analysis: Protein 20%; Fat 5%; Fiber 7%; Nitrogen-free Extract 46%; Carbohydrates 53%.



Hi There! Use Conkey's Scratch Grains



Conkey's Chick Grains

Just the thing to feed in connection with Conkey's Buttermilk Starting Feed after the chicks are two to three weeks old. When scattered in the litter it promotes exercise and tends to prevent toe-picking.

Conkey's Growing Grains

Cracked grains larger in size than Chick Grains and balanced especially for growing birds. Scatter in litter or feed in hopper same as you do mash. These grains tie up well with Conkey's Gecco Growing Mash.

Conkey's Scratch Grains

Feed these to the laying flock with Conkey's Gecco Egg Mash to round out the hen's daily ration. If the birds are watched closely it is easy to keep them up to proper weight when laying heavily.

Pratts

Poultry Feeds and Remedies

HEALTHY BIRDS AND LOTS OF EGGS, THE TWO BIG THINGS IN POULTRY-RAISING, FOLLOW THE USE OF PRATTS



Pratts Poultry Regulator

Builds up vitality, promotes sound digestion, sharpens appetite, and puts birds into condition for heavy egg-laying or winning blue ribbons.

Given to breeding stock, it increases the fertility of eggs, strong in vitality, that will hatch healthy chicks that will develop into husky pullets and cockerels.

Pratts is the original Poultry Regulator of America, and is in use by the most successful poultry-raisers everywhere. It will prevent many of the common poultry ailments. Pkgs.

25 cts. and 50 cts.; postpaid, 30 cts. and 60 cts.; 12-lb. pkg. \$1.40, postpaid \$1.65; 25-lb. pails \$3, postpaid \$3.40; 100-lb. drum \$10.

Pratts N-K Capsules

A specially air-tight coated Capsule of nicotine and kamala for individual treatment for tape- and round-worms. Easy to give; contents always keeps fresh and powerful. Ingredients recommended by all poultry authorities. N-K's are certain in action, safe, economical, and easy to use. Made in two sizes, for adults, and chicks. Adult Size. Pkg. of 50 capsules \$1, \$1.75 per 100, \$7 for 500. Chick Size. Pkg. of 50 capsules 65 cts., \$1 per 100, postpaid.



Pratts S/H

Stop big poultry losses from roup, pneumonia, diarrhea, coccidiosis and other infectious diseases. Pratts S/H used constantly in the drinking water will help prevent the spread of these diseases. It is a better, purer sodium hypochlorite for far less money.

Also effective for disinfecting hatching eggs, incubators, brooders, and fattening crates.

10 ozs. 50 cts., qt. \$1, gal. \$2.50, 5 gals. \$10, not prepaid.



Pratts Poultry Worm Powder

For effective and practical flock treatment. Rids poultry of large, round- and tape-worms as well as many other kinds. Safe, easy, and economical to use. Does not require handling or individual dosing of the birds or affect egg-production or growth during treatment. 50 cts. and \$1; postpaid, 60 cts. and \$1.15; 25-lb. bag \$3.60, postpaid \$3.95.



Pratts Roost Paint

A solution of nicotine sulphate combined with other active insecticides. Will positively kill lice. Spray or paint it on the roosts. Brush free with every can. 10-oz. can 75 cts., 20-oz. can \$1.25, 40-oz. can \$2, 10-lb. can \$6 (not mailable).

Pratts R-P Tablets

For roup, colds, and similar diseases

Pkgs. 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.

Pratts Chick Tablets

Formerly known as Pratt's White Diarrhoea Remedy

Pkgs. 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.

Pratts Disinfectant

FOR STOCK AND POULTRY

A quick, effective germicide, insecticide, and deodorant. As a spray around stables, cow- and hog-lots, and for use on dogs, cats, and pets generally, it is unsurpassed for effectiveness. It is non-irritating and its pleasing, clean odor makes it admirable for household use. Pt. 40 cts., qt. 60 cts., 2 qts. \$1, gal. \$1.60; postpaid, 50 cts., 75 cts., \$1.20, and \$1.90; 5-gal. can \$7.25.



Pratts Red Mite Special

Ot. 60 cts., 1/2 gal. \$1, gal. \$1.60; postpaid, 75 cts., \$1.20, and \$1.90.

Pratts Powdered Lice-Killer

Pkgs. 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.

Pratts Feeds

Pratts are the highest quality poultry feeds made in America. Backed by over fifty years' experience with poultry, every ingredient carefully selected and processed in the most modern poultry-feed mill in the United States, they are scientifically and practically correct. Pratts Feeds give results when others fail and pay bigger profits to the users. There is a Pratt feed for every poultry need and every age of fowl. Start your birds on Pratts and follow the Pratt system if you want real success and profit.



Pratts Buttermilk Baby Chick Food

This original "baby food for baby chicks" has taken all the guess, worry, and loss out of raising chicks. Pratts is guaranteed to raise every livable chick. A perfect "baby food" for young fowls. In packages and 5, 10, 25, 50, and 100-lb. bags.

After the husky little fellows are about two weeks old, gradually switch them to

Pratts Buttermilk Growing Mash

Made of the most wholesome ingredients, it supplies an abundance of every element needed for making bone, muscle, feathers, and health. Insures vigor and quick, uniform growth. Feed Pratts and watch them grow. When they are matured give them

Pratts Buttermilk Laying Mash

The food that "makes eggs." Every ounce is real food that nourishes and keeps your hens laying and healthy. Appetizing. You fill the hopper and the hens will fill the nest.

Pratts Scratch Feeds

Pratts Chick Size Scratch Feed for Baby Chicks.

Pratts Intermediate Size Scratch Feed for Growing and Laying Stock.

Pratts Large Size Scratch Feed for Laying Hens.

Pratts Pigeon Feed for Pigeons.

For prices on above Feeds, see our Poultry Feed Price-List accompanying this catalogue

Semi-Solid Buttermilk

(TRADE MARK)

With or without Cod-Liver Oil

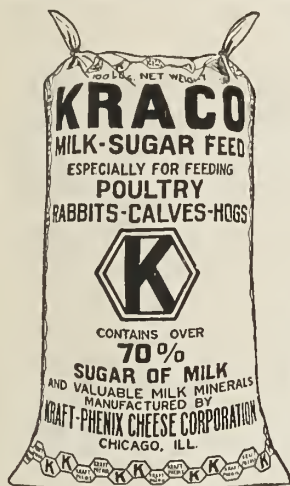
A life-saver for chicks. A remedy for White Diarrhea. Promotes rapid, healthy growth. Hustles hens back to health and laying after epidemics of roup, chicken-pox, or cholera. Rids hens of worms. Unequaled as an egg-producer for pullets and hens. Semi-Solid is pasteurized condensed buttermilk. Has greater medicinal and food value than liquid or dried buttermilk because the patented process gives Semi-Solid the greatest lactic acid content of any form of buttermilk.

Semi-Solid Buttermilk with 4 per cent Cod-Liver Oil added. This combination is the most practical and economical method of feeding cod-liver oil. It is palatable and, furthermore, this oil is vitamin "D" tested. For extra-heavy egg-laying strains, it will prevent egg paralysis.

Best results are obtained by feeding Semi-Solid Buttermilk just as it comes in the package. No other animal protein is required when laying hens are fed Semi-Solid at rate of 5 lbs. for every 100 head.

Semi-Solid Buttermilk comes in 1-gallon cans, 5-gal. pails, kegs, half-barrels, and 500-lb. barrels.

Ask for booklet giving further information.



More Profit from Your Poultry

"Kraco" is made from liquid whey and contains the valuable milk-minerals needed in a poultry-feed. It does not destroy the balance of your feed-ration.

Feed "KRACO" MILK Sugar Feed

FOR BABY CHICKS. Feed $7\frac{1}{2}$ per cent "Kraco" Milk Sugar Feed and see how greedily they eat their mash. Note the health and thrift.

FOR GROWING BIRDS. On account of its low protein content, growing birds get the health and thrift of milk-feeding without the danger of high protein. Feed them 5 per cent "Kraco."

FOR LAYING HENS. Three per cent "Kraco" Milk Sugar Feed keeps layers in the best of condition. If you follow the use of "Kraco" through the entire year, you will get much greater return from your investment in feed.

FOR COCCIDIOSIS. When this disease starts, stop it quickly by using 25 per cent "Kraco" for a few days.

Miscellaneous Seeds and Grains

Cracked Corn
Whole Corn
Pigeon Corn
Cracked Wheat
Pinhead Oatmeal
Hulled Oats
Sunflower Seed

Hemp Seed
Canary Seed
Rape Seed
Kaffir Corn
Pigeon Peas
Whole Flaxseed
Flaxseed Meal

Barley
Wheat
Buckwheat
Millet
Vetches
Oil-Meal
Gluten Meal

Our stocks of the above are carefully selected and will be found equal to any on the market.

"Chamberlain's Perfect" Chick Starter and Developing Feed

with Buttermilk, Cod-Liver Oil, Animal Proteins

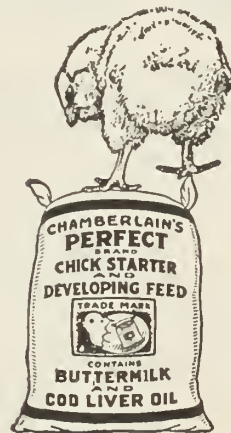


Nature's food for Baby Chicks, Turkey Poults, Bantams, Pheasants, and Ducklings.

This original and scientifically correct starting-food is the only dry, granular, baby chick food with animal proteins, buttermilk, and cod-liver oil—all complete in one sack.



It is a wheat and oat-meal basis food, having ground meat, bone, charcoal, and all other essential ingredients. No corn—made right—no bowel trouble.



Spratt's Pheasant Meal Nos. 3, 5, and 12

No. 3 Coarse (for adult birds)

No. 5 Medium (after three weeks old)

No. 12 Fine (before three weeks old)

Is prepared strictly according to modern scientific methods and is the result of careful and exhaustive experiments.

It has been demonstrated and is admitted by all experts that to rear birds successfully and bring them to the highest state of perfection they must have, while very young, a cooked food. Spratt's Pheasant Meal is composed of cereals, meat, vegetable, bone, and shell in judicious combination.

Spratt's Maxco

To develop healthy, full-sized birds every feeding care must be given to Pheasant poults. Spratt's Maxco No. 12 is easy to digest, promotes quick feathering and fortifies the poult against all possible ill effects of weather and disease.

Ask for free copy of Spratt's Pheasant Bulletin.

For prices on above feeds see our monthly poultry feed price-list accompanying this catalogue



Darling's High Protein Meat Scraps

Made from clean, fresh trimmings from butcher shops, thoroughly cooked. After the cooking, every possible bit of water and grease is extracted in tremendous presses, and the solid cakes of meat are evenly broken up by special machinery. It contains more digestible protein, and less fat, moisture and waste, than any other brand of meat scraps or so-called beef scraps.

ANALYSIS

Protein.....50 per cent
Fat (minimum).... $\frac{1}{2}$ of 1 per cent
Fiber (maximum).....3 per cent

Furnished in two grades, regular and fine.



Struven's Fish Meal

This is made from the whole menhaden fish, fresh from the sea. It contains all the flesh, bones, and internal organs of the menhaden fish.

The minerals of Struven's Fish Meal prevent leg-weakness or rickets. Its iodine

prevents goiter, promotes assimilation of food, and improves the coat or plumage. Its proteins are 95 per cent digestible and keep animal and fowl peppy and in splendid flesh. Its fats are the source of two of the most valuable vitamins—"A" and "D."

The average analysis of Struven's Fish Meal varies from 58 to 62 per cent Protein; 6 to 10 per cent Fats; 20 to 22 per cent Minerals; less than 1 per cent Fiber.

Yankee Brand Dried Buttermilk

It contains everything found in whole milk and whole milk is universally recognized as the best food for man or animal. It contains no fiber. Every ounce of it is utilized in maintaining and building animal tissues, as it contains the most valuable constituents of all foods. In feeding Dried Buttermilk you feed milk solids. Contains 32 to 33 per cent milk protein and 4 per cent fat.

Butterfly Brand Dry Skim-Milk

A sweet, cream-colored powder, rich in vitamins and almost totally soluble in water. It carries an average analysis of 36 per cent protein, and contains no fiber. One hundred pounds of Dry Skim-Milk represents the total milk solids found in 1,200 pounds of liquid skim-milk, and supplies the vitamins, protein, and mineral matter (especially calcium) which are essential in the diet of all young animals for rapid growth.

Conkey's Pigeon Feed

A first-class mixture containing peas, Kaffir corn, wheat, buckwheat and millet.

ANALYSIS

Protein, 13 $\frac{1}{2}$ per cent; Fat, 2 $\frac{1}{2}$ per cent; Fiber, 5 per cent.

Alfalfa Leaf-Meal

Ground fine and made principally from green alfalfa leaves.

ANALYSIS

Crude Protein not less than 20 per cent; Crude Fat not less than 2 per cent; Crude Fiber not more than 18 per cent.

Cut Red Clover

Cut Red Clover is one of the best green feeds for winter egg-production. The grade we offer is the purest and best to be had. Makes an excellent litter for chicks.

Darling's Special Bone-Meal

Darling's Special Bone-Meal was developed to meet the urgent need for a feed rich in available phosphates, palatable, and suited to the mineral requirements of all live stock and poultry. It is finely ground for convenience in mash mixtures and is especially valuable during growing and moulting periods for poultry. As a part of dairy cattle and hog rations, Darling's Special Bone-Meal provides minerals in an organic form that are readily absorbed by the body system, insuring quicker and better results in growth and production. Recommended by those who have used it.

Poultry Charcoal

Keeps poultry strong, healthy, and in good laying condition. Aids digestion, corrects wrong feeding and prevents disease. Fowls young and old should have free access to it at all times. We carry two sizes in stock—Medium and Fine.



Nopco Cod-Liver Oil (U.S.P.)

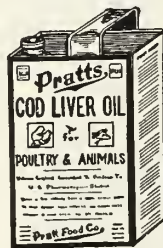
Fortified in Vitamin D Potency

Nopco is fortified in Vitamin D—it therefore goes farther than ordinary fish or cod-liver oils. Nopco is tested for vitamin content before and after it is fortified with the Vitamin D concentrate extracted by the Columbia University process. It is tested for both Vitamins A and D on albino rats and is further proved for Vitamin D by an eight-weeks' test on chicks. Every dollar you spend for Nopco Fortified in Vitamin D is an investment in thrift.

Qt. can 75 cts., postpaid 90 cts.; 2-qt. can \$1.35, postpaid \$1.55; 1-gal. can \$2.40, postpaid \$2.70; 5-gal. can \$9.75; 30-gal. drum \$52.50.

Pratt's Vitamin-Tested Cod-Liver Oil

PREPARED SOLELY FOR POULTRY AND ANIMALS



Cod-Liver Oil derives its great feeding properties and value from its content of vitamins "A" and "D," of which it is the richest known source. Pratt's Cod-Liver Oil is a pure, clear, light yellow, tested oil, with a vitamin content guaranteed to conform to the standard of the United States Pharmacopeia.

Pratt's Cod-Liver Oil, added to the feed of baby chicks, aids growth, promotes health, prevents leg-weakness, and decreases mortality. The use of Cod-Liver Oil for layers results in better health, fewer deaths, more and better-

shelled eggs, increased hatchability of eggs, quicker growth, and greater weight in market stock.

Add it to the feed of dogs, cats, cows, steers, hogs, sheep, squabs, turkeys, and pet stock. Gal. can \$2, postpaid \$2.30; 5-gal. drum \$6.25. 30-gal. drum, with faucet, \$27.50; 50-gal. drum \$45, shipped from factory, freight prepaid.

Co-Liv-Ol

COD-LIVER OIL IN POWDER

For chickens, pigeons, ducks, geese, and fowl of all kinds; and hogs, and foxes. "Co-Liv-Ol" increases egg-laying, is a sure conditioner and a wonderful body-builder. It is a sure profit-maker for poultrymen. It means earlier layers, more eggs, and fatter killers. Use 1 pound of "Co-Liv-Ol" to 100 pounds of feed for a laying or growing mash and 2 pounds to 100 pounds of feed in a starting mash. Easy to mix with feed. Simply sprinkle it through the feed and mix it in a jiffy.

		Postpaid
5-lb. pkg.	\$1 75	\$1 90
25-lb. drum	4 00	4 35
100-lb. drum	12 00	

Ikton Soluble Organic Sulfur

A scientific product containing pure, soluble, organic sulfur. When added to feeds it replaces the sulfur that is used up by the fowl in egg-laying and breeding. Use one ounce to every 100 pounds of dry feed for chicks up to ten weeks of age—only two ounces for older birds. Lb. can \$3, postpaid \$3.10.



Belle Brand Crushed Oyster Shells

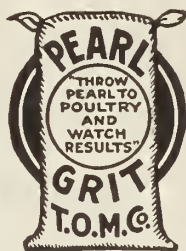
Make Poultry Pay!

Crushed Oyster Shells have long been recognized as a most important article for poultry yards. They should be kept where the fowls can have easy access to them all the year round, as experience has demonstrated that fowls need them in summer as well as winter. They supply carbonate of lime in natural form, act as a grit, and produce a firm, hard shell. Belle Brand shells are dry, and, having been carefully screened, are free from dust and dirt.

We carry two sizes in stock, Coarse and Fine, the prices of which are the same.

Pearl Grit

A clean, white limestone Grit which is of proper hardness to serve as a grinder and at the same time, because of its high calcium carbonate content, supplies the necessary minerals for growing chicks and laying hens. The claims made for Pearl (Limestone) Grit have been verified at a great number of experimental stations in the United States. Furnished in two sizes—coarse for poultry and fine ground for chicks.



Mica Crystal Grit

Analysis proves that Mica Crystal Grit is a grit containing a proper combination of Mica, Quartz, Aluminum and Iron essential to all kinds of poultry. The peculiar formation of this grit, containing a large per cent of small flakes of Mica, assures at all times a sharp grinding surface. The grit will not wear smooth but will keep sharp until entirely worn out.

The grit wears out but does not dissolve, thereby giving a longer service than other grits.

Furnished in three sizes, "Poultry," "Pigeon," and "Chick," all at the same price.

Broschkowsky's Health Grit

For pigeons. Has a friend in every fancier who has tried it. Every ingredient entering into the composition of Broschkowsky's Health Grit is the best obtainable, clean and is prepared amid sanitary surroundings. One trial will convince you of its superior quality. It contains nothing injurious of any nature; keeps your birds' digestive organs in prime order; provides the proper shell material; assists the birds in the moult; raises more and stronger youngsters; and wards off many troublesome diseases.

Red Cross Health Grit

Since 1903

For Pigeons, Fowls, and Cage-Birds

Positively the Best. A formulated mixture containing a great variety of gritty particles and materials with tonic properties, including everything the bird needs in proper proportions.

You save all other trouble and expense when using Red Cross, as only water and good feed in addition are required to keep birds in perfect health.

They Eat It Like a New-Found Luxury. All birds relish it. Contains in condensed form the best tissue-building ingredients for birds known to science. A reconstructive tonic mixture of only pure properties. Never use chicken grit for pigeons.

Good grain alone will not make hens lay, squabs plump, or birds sing; they have no teeth and must have grit to grind their food and it should be a palatable grit mixture they relish.



A Reliable Remedy for Coccidiosis or Bloody Diarrhea.

This dreadful disease has caused the loss of thousands of chicks, and often entire flocks have been practically swept away. Morti-Cocci was developed by a poultryman of many years' experience. It is used and recommended by many leading poultrymen. The remedy should always be kept on hand for immediate use at the first symptoms of the disease. Add it to the drinking-water. A gallon will eradicate the disease from 500 chicks. Complete directions on package. Qt. \$1.50, 1/2 gal. \$2.50, gal. \$4; postpaid \$1.65, \$2.75, and \$4.40.



"Black Leaf 40"

WORKS WHILE CHICKENS ROOST

Paint it on the roosts

A sure method for controlling body-lice. Is also effective when applied as a spray against poultry mites. One ounce will paint about 12 or 15 running feet of roost. Paint it undiluted on the top of the roosts and cross-arms, about half an hour before the birds perch for the night. When used as a spray against poultry mites, dilute Black Leaf 40 at the rate of about one tablespoonful to one gallon of water and add about 1/2 ounce of ordinary laundry soap. Dissolve the soap in hot water. 1-oz. bottle 35 cts., 5-oz. can \$1, 1-lb. can \$2.50. (Not mailable.)

Oculum

Scientific Remedy and Preventive for Cholera, Roup, White Diarrhea, and Sore Head; also Cure for Gapes

Give your hens Oculum and they will get heavier, their combs will get red and stay red; they will lay much better and more regularly, and in the fall and winter, you will get eggs while the other fellow is vainly looking for the eggs that do not come.

Bottle.....\$0 50
Large Bottle.....1 00



Walko Tablets

For the drinking-water for baby chicks, turkeys, ducks, or geese; also for older fowls.

Especially valuable for diarrhea and loose-bowel trouble among incubator chicks. Powerfully destructive to germ-life, yet perfectly safe to give little chicks in their drinking-water as soon as they are out of the shell.

Also recommended for the swellings of roup in the head and simple catarrh among older birds. 50 cts. and \$1; postpaid 55 cts. and \$1.10.



Walko Tonic

A general poultry tonic, appetizer, and vitalizer. Does not over-stimulate the organs but by its general tonic effect it keeps your birds in the pink of condition, which assures their greatest capacity for egg-production. 50 cts. and \$1; postpaid 55 cts. and \$1.10.

Roto Pigeon Salt

A Necessity to the Health of Pigeons

Roto Pigeon Salt is compressed into bricks that are not affected by any climatic conditions. Size of Bricks, 7 1/2 x 3 1/2 x 2 inches. Each 25 cts., postpaid 35 cts.; doz. \$2.25, postpaid \$2.40.

Ex-Cel-So Rabbit Salt Spools

Made from pure salt with sulphur added. No feeder or holding device necessary, as Spools are fastened to wall by means of nail or screw through hole in center. Size, 2 in. diam., 1/8 in. thick. Each 5 cts., doz. 50 cts., postpaid 70 cts.



Have a Conkey Corner



Conkeys Y-O VI-TAL-IZES YOUR FEED

Conkeys Y-O is a vitamin food contains cod-liver oil and brewers' yeast. It carries an abundance of the A, B, and D vitamins so necessary for complete digestion. This product comes in the form of a powder which is free-running and mixes readily with any poultry-mash. Only 2 to 3 per cent of this potent vitamin food is required in any mash. Conkeys Y-O in the feed brings more eggs, larger eggs, eggs of greater fertility and hatchability. With chicks, it helps to reduce mortality, prevents leg-weakness (rickets), and makes sturdy, fast-growing chicks with exceptionally well-developed bones. It is also fine for rabbits, foxes, dogs, and cats. Lb. 50 cts., 2 lbs. 90 cts., 5 lbs. \$1.60, drums (25 lbs.) \$6.50; postpaid 60 cts., \$1.05, \$1.80, and \$6.90; 50 lbs. \$11.50, 100 lbs. \$19.50.

Conkeys Nox-i-cide

Conkeys Nox-i-cide has a large variety of uses about premises and is approved by poultry experts everywhere. Use Conkeys Nox-i-cide for spraying during the "weekly clean-up" as a preventive of disease and a help in keeping down red lice, ticks, blue bugs, etc. Conkeys Nox-i-cide is very effective for washing incubators, brooders, fountains, etc. Pt. 50 cts., qt. 80 cts., 2 qts. \$1.30, gal. \$2; postpaid 60 cts., 95 cts., \$1.50, \$2.30; 5 gals. \$9.25, 10 gals. \$17.75.

Conkeys Salvo (Formerly called Sorehead Remedy). Good to have on hand for treating sores, cuts, and wounds of any description. 25 cts. and 50 cts.; postpaid, 30 cts., and 55 cts.

Conkeys Scaly Leg Remedy. Destroys parasites causing this troublesome affection. 25 cts.; postpaid, 30 cts.

Conkeys Lice Powder. Destroys body lice.

They suck the energy from your flock.

Dust Conkeys on your hens and in the dust-bath. 20 cts., 35 cts., 75 cts., and \$2.60; postpaid, 25 cts., 40 cts., 85 cts., and \$2.85.

Conkeys Head Lice Ointment. Gets the big, murderous fellows that bore through the little chicks' skulls. 10 cts. and 25 cts.; postpaid, 15 cts. and 30 cts.

Conkeys Mite Liquid. Made especially to destroy the spider-like mites that laugh at ordinary lice preparations. Qt. 60 cts., 2 qts. 90 cts., gal. \$1.50; postpaid 70 cts., \$1.10, and \$1.80; 5 gals. \$7. Express extra.

Conkeys Balmo

Formerly called Conkeys Canker Special

A soothing, cooling application for relieving irritation around the swollen eyes and head and in the mouth when treating conditions caused by colds and similar troubles. Pkg. 50 cts., pt. \$1.20, qt. \$2; postpaid, 55 cts., \$1.30, and \$2.15.

Conkeys Poultry Worm Remedy

For large, round worms

Over 90 per cent of market poultry are infested with worms, of which there are many varieties—Round Worms, Gizzard and Cæcal Worms and Flukes or Leaf Worms. Worms cause great loss and flocks should be treated regularly. Pkgs. 25 cts. and 50 cts.; postpaid 30 cts. and 55 cts.; breeder size (5 lbs.) \$2.75, postpaid \$2.90.

ONLY vigorous, healthy birds can produce profit. Keep disease out of your flock by having on hand remedies for treating common ailments. A "Conkey corner" is fine insurance against loss of valuable fowls. We recommend Conkeys remedies because they are absolutely dependable. We sell them on this guarantee—your money back if you are not satisfied.

Write for 64-page Conkeys Poultry Book, a handy book of reference on poultry raising. *It's free.*

Conkeys Poultry Tonic

Unequaled as a laying tonic, molting powder, chick-conditioner, and poultry-regulator. Not a stimulant—no red pepper. Aids appetite, digestion, and helps your birds get more out of their feed. 1½ lbs. 25 cts., postpaid 30 cts.; 3¼ lbs. 50 cts., postpaid 60 cts.; 7 lbs. \$1, postpaid \$1.20; 12 lbs. \$1.60, postpaid \$1.85; 25 lbs. \$3, postpaid \$3.40.



Conkeys Poultry Pills

Formerly called Conkeys Roup Pills

Administer these pills twice daily, in extreme cases three times a day. 25 cts., 50 cts., and \$1; postpaid, 30 cts., 55 cts., and \$1.05.

Conkeys Old Reliable Powder

Formerly called Conkeys Roup Remedy

This famous treatment has been on the market for thirty years, known to poultrymen everywhere as Conkeys Roup Remedy. Many would not try to keep poultry without Conkeys—the Old Reliable. Easily given in the drinking-water letting the birds help themselves. Keep it on hand for use in emergency or put it in drinking-fountains on cold, rainy days or when there is a sudden change in weather. In mild doses it acts as a tonic. 25c., 50c., \$1, and \$2.35; postpaid 30c., 55c., \$1.05, and \$2.50.

Conkeys Diatex

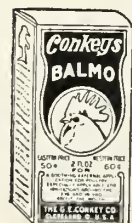
Formerly called Conkeys White Diarrhea Remedy

The majority of diarrhea cases in chicks are due to digestive disorders which arise from feeding, chilling, overheating, crowding, insanitation, etc. The use of Conkeys Diatex Tablets—formerly called Conkeys White Diarrhea Remedy—in the drinking-water will help prevent trouble. Pkgs. 25 cts., 50 cts., \$1, all postpaid; breeder size (950 tablets) \$3.75, postpaid \$3.85.

Baby Chicks

We exercise extreme care in the selection of our Baby Chicks and supply only Chicks from selected matings and blood-tested flocks, under state supervision.

Price-List gladly sent on request.



We Recommend Burrell-Dugger Poultry Remedies

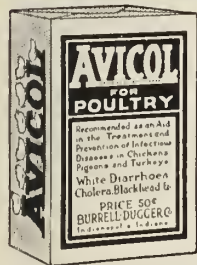
Burrell-Dugger Poultry Remedies have been used by thousands of poultry owners, from coast to coast, for many years, and they have more than made good.

They are specialized remedies for poultry, produced in an up-to-date modern laboratory, just as scientifically and carefully as medicines for human beings.

Knowing the satisfaction which Burrell-Dugger remedies have given our customers, we do not hesitate to recommend them strongly. Every one is guaranteed to satisfy you, or your money will be promptly refunded in full.



FOR CHICKS



Use Avicol Regularly! It Will Pay You

Don't sit back, and say your loss of baby chicks can't be stopped. It can be stopped—easily, quickly, and at almost no expense by using Avicol in the drinking water occasionally. Avicol is a special bowel astringent, and helps the chick withstand infection.

Easy to give. Simply drop an Avicol Tablet in the drinking water. The chickens doctor themselves.

After you have once tried Avicol, you would no more think of trying to raise baby chicks without it than you would think of denying them food.

Avicol should be in the very first water the little chicks drink. And it costs so little that it will pay you to keep it in the drinking-water all the time, for all the flock, old and young.

Avicol is fully guaranteed. Your money will be promptly refunded without question or quibble if it doesn't satisfy you perfectly.

Price, 50 cts., postpaid 55 cts.; large size (holds two and one-half times 50-ct. size), \$1, postpaid \$1.10.

TALCIMIZED SODIUM FLUORIDE

KILLS CHICKEN LICE

The U. S. Department of Agriculture and most leading State Agricultural Colleges endorse and recommend the Sodium Fluoride method of killing poultry lice.

Lice have probably cost the poultryman more money than any other poultry ailment. Wherever present, their effect is seen in stunting the growth, injuring the health, and reducing the egg-production of the whole flock.

After years of study and after numerous tests they report it the most effective, positive way to get rid of poultry lice. They say it kills all lice—both old and young—including the lice that hatch from eggs present on the fowl at the time of treatment.

For positive results be sure to get the genuine Talcimized Sodium Fluoride (call it T. S. F.) put up by the Burrell-Dugger Co. It is specially processed and prepared especially for poultry use, and is in a convenient, shaker-top package, bearing the U. S. Government's instructions for applying. One small package will treat about 40 chickens.

Price, small size 35 cts., postpaid 40 cts.; large size (twice as much), 60 cts., postpaid 70 cts. Special size (five times 60-ct. size), \$2.50, postpaid \$2.65.



DON SUNG

Tonic and Conditioner for Laying Hens

Don Sung is a concentrated medicine—no bulk or filler—ready to add to the mash-feed. It has a direct tonic action and doesn't force or hurt the hen in any way. It does its wonderful work by putting the hen in good health, and helping maintain that health.

Costs Nothing to Try

Every poultry raiser is invited to try Don Sung—at our risk. Separate 15 hens and give them Don Sung for one month. The 50-ct. Trial Size handles this test. If Don Sung pays you, keep on with it. If you don't think it has paid you, tell us, and back comes your money. No argument to it. Don Sung is guaranteed—try it, at our risk.

Prices of Don Sung Tablets: Small guaranteed size, 50 cts.; large size (3 times 50-ct. size), \$1; special size (6 times \$1 size), \$5.



Group-Over

(Formerly called Roup-Over)

A New, Prompt,
Positive Guaranteed Treatment
FOR

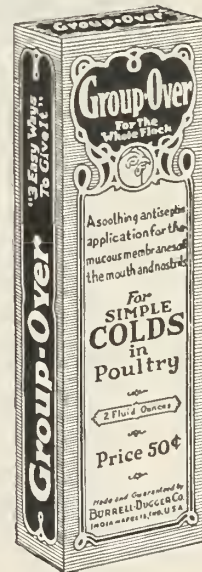
COLDS IN POULTRY

Keep Group-Over Handy—
Ready to Use

Keep a bottle of Group-Over on hand, and at the first symptom of a cold in your flock, start giving it to every affected bird. It clears the air-passages and brings relief with magic quickness. Group-Over is easily given. It comes in a liquid form and a few drops do the work.

This famous remedy is positively guaranteed to give complete, prompt, and positive results, or your money will be refunded in full. There is nothing on the market like Group-Over for roup, colds, and canker.

Price 50 cts., postpaid 55 cts.; large size \$1, postpaid \$1.10 (three times 50-ct. size).



Rust's Poultry Preparations

Rust's Poultry Preparations are used extensively by the leading poultry-raisers and are considered by many as the best on the market. They are absolutely reliable and we can recommend them to our poultry friends.



Rust's Tonic and Appetizer. To expect hens to lay as they should, they must be properly rationed and kept in good physical condition. Feed Rust's Tonic and Appetizer all the year round. When bought in the large size, it costs about 2 cents a month for each hen, to feed it. 1-lb. pkg. 25 cts., 2½-lb. pkg. 50 cts., 6-lb. pkg. \$1, 25-lb. pkg. \$3.25; postpaid 30 cts., 60 cts., \$1.15, and \$3.65.

Rust's Climax Condition Powder. For poultry, horses, cattle, sheep and hogs. It is unlike any other preparation, and being of concentrated strength it is very economical to use. Full directions for feeding contained in each package. 13-oz. pkg. 25 cts., 2-lb. pkg. 50 cts., 5-lb. pkg. \$1, 20-lb. pkg. \$3.25; postpaid 30 cts., 60 cts., \$1.15, and \$3.55.



Lee's Germozone

20-tablet pkg. 25 cts.; 75-tablet pkg. 75 cts.; 200-tablet pkg. \$1.50, postpaid 30 cts., 85 cts., and \$1.60.

Iodine Suspensoid Merck

USED TO PREVENT AND CONTROL
COCCIDIOSIS

The only known material which can be used in a practical and economic way to destroy coccidial oöcysts, the eggs of the parasite which causes coccidiosis. Coccidiosis is one of the most serious and widely spread diseases of poultry, and usually makes its appearance in chicks about three weeks of age, and from then on until the age of three months causes a very high death-rate. ½-lb. bottle \$2.50, ppd. \$2.60; 1-lb. bottle \$4.75, ppd. \$4.85.

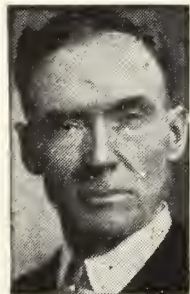
Iodine Vermicide Merck

Kills worms the approved way

For internal use and is sold only in a concentrated form. It must be diluted with water before using. One gallon of diluted material is sufficient to treat about 125 adult birds. Unlike other worm remedies, Iodine Vermicide will not throw birds off egg-production, but will, if properly used, increase it materially. Some of the official state egg-laying contests use the Vermicide on all the birds entered, with excellent results. Used by leading poultrymen. ½-lb. bottle \$2.40, postpaid \$2.50; 1-lb. bottle \$4.50, postpaid \$4.60. Dosing Appliance, chick and poultry size 35 cts.; adult turkey size \$1.

Lee's Gizzard Capsules

For round worms, tape-worms, pin-worms in chickens, turkeys, etc. 50-capsule pkg. \$1, 100-capsule pkg. \$1.75, 250-capsule pkg. \$4, 500-capsule pkg. \$7, postpaid.



Dr. L. D. LeGear,
V. S.



Dr. LeGear's Prescriptions

Dr. L. D. LeGear, V. S. Graduate Ontario Veterinary College, 1892. Thirty-seven years' veterinary practice. Eminent authority on diseases of poultry and stock. Nationally known poultry breeder. Noted author and lecturer. Hear Dr. LeGear lecture on poultry and live stock. Read Dr. LeGear's articles in newspapers and farm journals. Hear his talks over the radio.

Dr. LeGear's Poultry Prescription—Mineralized. An Iron and Nux Vomica Tonic. This wonderful tonic contains mineral and vegetable ingredients, scientifically compounded to produce an efficient tonic, appetizer, conditioner, and regulator. Furnishes essential elements for strong, healthy growth; builds up vitality; gives maximum egg-production; quickens moult. 25 cts., 50 cts., and \$1; postpaid 30 cts., 60 cts., and \$1.15; 25-lb. pail \$3, postpaid \$3.35.

Dr. LeGear's Poultry Worm Powder. Flock treatment for large round worms in growing chicks, laying hens, and turkeys; in fact, for use in mash feed for the whole flock. 4-lb. pkg. \$1, postpaid \$1.15.

Dr. LeGear's Dip and Disinfectant. Antiseptic disinfectant, germicide, and deodorant. Use regularly to keep poultry-houses, incubators, brooders, hovers, runs, roosts, drop-boards, etc., sanitary and free from lice and mites. An ideal disinfectant for home use. Results guaranteed or money refunded. Qt. 65 cts., ½ gal. \$1, gal. \$1.75; postpaid 80 cts., \$1.20, and \$2.05.

Dr. LeGear's Nicotine-Kamala Pills. For individual treatment. Gets the tapeworms and round worms. 50 tablets \$1; 100 tablets \$1.75, postpaid.

Dr. LeGear's Nicotine Pills. For large round worms in poultry. No fasting. Easy to give. 50 pills 50 cts., postpaid.

Dr. LeGear's Chick Tablets. An intestinal astringent. Helps baby chicks to get the right start. When dissolved in the drinking-water it has a mild, antiseptic effect on the water which is very beneficial to all baby chicks as an intestinal astringent. 80 tablets 50 cts., postpaid 55 cts.

Dr. LeGear's Lice Powder. Quick and effective in getting rid of lice and mites on poultry or in nests. Kills them as if by magic. Put up in handy sifter-top cans. Easy to apply. 14-oz. can 25 cts., postpaid 35 cts.

Other Dr. LeGear Preparations

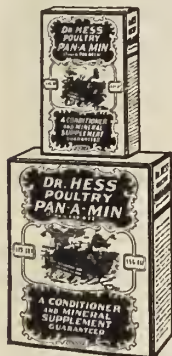
There are many other Dr. LeGear Prescriptions. All are sold on a guarantee of satisfaction or money refunded.

Lippincott's One-Night Roup Cure

Has No Equal For

Roup, Gapes, Canker, Chickenpox, Cholera, or Diarrhea

Lippincott's One-Night Roup Remedy has never failed to give quick results when used in the proper way and the birds properly housed. 25 cts., 50 cts., and \$1 per bottle; postpaid, 35 cts., 60 cts., and \$1.10.



Dr. Hess Poultry Pan-A-Min

Pan-a-min has been known to poultry-raisers for more than 30 years as Dr. Hess Poultry Pan-a-ce-a.

It is now a greatly improved product. More minerals have been added. It contains new medicinal ingredients, and other active ingredients in different proportions.

Pan-a-min is of high value to moulting hens, in egg production, in reducing chick mortality, in bone and feather growth and in maintaining health.

It does not take the place of feed and no feed can take the place of Pan-a-min. The cost is less than a penny per hen per month.

	Each	Postpaid		Each	Postpaid
3-lb. pkg.....	\$0 50	\$0 60	25-lb. pkg....	\$3 00	\$3 35
7-lb. pkg.....	1 00	1 15	100-lb. drum..	.10 00	
15-lb. pkg.....	2 00	2 25			

Dr. Hess Poultry Ver-Mi-Trol

For Worms in Poultry

Dr. Hess Poultry Ver-mi-trol is a flock treatment. No individual handling of birds is necessary. It is simply given with the feed in two 10-day courses, three weeks apart, with Dr. Hess Poultry Pan-a-min fed regularly.

It is not drastic, does not throw hens or pullets off production and does not interfere with growth and development of young birds. It is palatable, all birds eat it readily.

As a preventive measure, to avoid worm infestation, a twice-a-year flock treatment, early summer and late fall, is strongly recommended.

	Each	Postpaid		Each	Postpaid
4-lb. pkg.....	\$1 25	\$1 40	25-lb. pkg....	\$6 25	\$6 60
10-lb. pkg.....	2 75	2 95			

Dr. Hess Poultry Tablets

(Formerly Roup Tablets)

For the treatment and prevention of roup, diphtheria, and all catarrhal diseases of fowls. 100-tablet pkg. 50 cts., 225-tablet pkg. \$1, postpaid.



Barnes Emulsion

A scientifically tested vitamin-containing product which can be fed with safety to domestic animals and poultry. It is not poisonous; contains no corrosive acids; is not a stimulant. If your chickens are backward in growth and development, have pale faces and shanks, and stand around droopy, with eyes closed, and if there is a steady and comparatively high mortality in your flock; if some of your birds "go light," then die; or if they are affected with brownish diarrhea,

the cause is likely to be from intestinal worm-infestation.

Other effects of worm-infestation include: irregularity in egg-laying, going lame, or developing "staggers," and particularly a condition of low vitality so they easily catch colds, sneeze, have watery eyes, canker, roup, and chicken-pox.

Obtain a can and prove to yourself its merit and effectiveness. Qt. \$1, postpaid \$1.15; gal. \$3, postpaid \$3.30; 5-gal. keg, \$12.50.

Ask for 32-page booklet "Common Sense vs. Worms."



THE ORIGINAL AND GENUINE

CARBOLINEUM

APPLIED ONLY ONCE A YEAR IN POULTRY HOUSES
KILLS MITES AND BLUE BUGS OR MONEY REFUNDED

Standard Insecticide and Wood-Preserver Since 1876

Avenarius Carbolineum will not only kill all vermin by direct contact, but, if sprayed or brushed, it will penetrate all cracks and crevices and reach the mites at close quarters and effectually stop their propagation.

Guarantee. We guarantee that one thorough application of Avenarius Carbolineum, either by brush or sprayer, to the interior walls, dropping-boards, roosts, etc., of buildings, after a previous cleaning, and no matter whether they are of wood, tar paper, or plaster, will exterminate mites in same for a whole year, or purchase money will be refunded.

PENNSYLVANIA STATE COLLEGE, DEPARTMENT OF POULTRY HUSBANDRY, PROF. H. C. KNANDEL, State College, Pa.: We have been using Carbolineum with very good success and you can rest assured that when we are in need of a good mite destroyer you will receive our order.

PRICES

1-gal. can \$1.75, 5-gal. can \$7.25, 10-gal. drum \$13, f. o. b. Pittsburgh; 35-gal. steel barrel \$33.25, 55-gal. steel barrel \$49.50, shipped from factory, freight prepaid.



Kopper's Kolineum

Guaranteed Poultry-House Insecticide and Wood-Preserver

Your money back if one application of Kopper's Kolineum does not rid your flock of mites and ticks for a whole year. Also a general wood-preserver for use everywhere on the farm—fence-posts, shingles, and all kinds of building lumber. Adds 6 to 15 years to the life of wood. Makes a beautiful stain for bungalows and farm buildings. Endorsed by agricultural colleges and experiment stations. 1-gal. can \$1.25, 5-gal. can \$5, 30-gal. drum \$18, 50-gal. drum \$25.

Nu-Life Remedies

Nu-Life Pills

For poultry, pigeons, and turkeys. Unexcelled conditioner for exhibition poultry, pigeons, and pit games. Unequaled as a remedy for going light, bowel trouble, indigestion, etc. A valuable aid in treating roup, and, if given in time, will stop most of the ills known to afflict poultry, pigeons, and turkeys. Should be given to all birds that are run down, off their feed, or not producing fertile eggs. Two sizes, 30 cts. and \$1, postpaid.



Nu-Life Special Pills

These pills are a highly concentrated combination of iron, nux vomica, quinine, pepsin, cod-liver oil, etc. They are especially valuable for the small mouth varieties of pigeons as they are considerably smaller than the regular Nu-Life Pills. They will accomplish the same results. Price, 40 pills, 50 cts.; 100 pills, \$1, postpaid.

Nu-Life Tonic (In Powder Form)

Is intended for flock or individual treatment. Is valuable to the busy fancier who has no time to give Nu-Life Pills. It can be placed in the mash-feed or drinking-water. Excellent for bowel trouble in old or young chickens and will quickly restore stunted chicks back to a healthy growth. Two sizes, 25 and 50 cts., postpaid.

Chic-Tone

FOR POULTRY
REG. U.S. PAT. OFF.
IN DRINKING WATER

Chic-Tone in the drinking water increases the appetite and builds up vitality. It is both an intestinal antiseptic and general tonic. Protects against many intestinal disorders—helps to keep your birds healthy, aiding them to get maximum value from the feed consumed. Poultry raisers everywhere are finding Chic-Tone in the drinking water a safeguard and insurance against low vitality. Qt. \$1, postpaid \$1.15; gal. \$3.50, postpaid \$3.80; 5 gals. \$13.75.

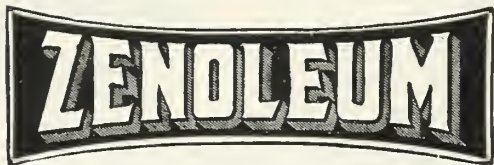


When poultry raisers pour Chic-Tone in the drinking water and spray Chic-Tone Inhalant in the air, their death-losses from colds and respiratory ills are kept way down, and that applies to birds of all ages from baby chicks to old hens. In some instances the abrupt cessation of epidemics—severe epidemics of infectious bronchitis—has seemed to the user little short of miraculous. Powerful, germ-killing gasses and healing oils in Chic-Tone Inhalant are inhaled by birds, opening up the nostrils, causing discharge of mucus, healing irritated membranes. Do not dilute. Spray right into faces of birds. Qt. \$1, postpaid \$1.15; gal. \$3.50, postpaid \$3.80; 5 gals. \$13.75.



McKeon's "Liquid Sulphur" Compound

Health-insurance for your entire flock worth 100 times its cost. Put in drinking water—3 drops to the gallon. Prevents Coccidiosis, Roup, Large Round Worms, Chicken-pox and other intestinal disorders. Use 6 to 12 drops where disease is present. Fool-proof, economical. 8-oz. bottle enough to treat over 1,200 gallons drinking water, postpaid \$1.25.



A single quart is all that is necessary to rid 100 hens of lice, mites, and germ filth; it cures and prevents all ordinary poultry ailments and diseases—contains nothing that is injurious—insures cleanliness—and safeguards your poultry's health and your own profits.

		Postpaid
8-oz. can, making 6 gals. of fluid.....	\$0 35	\$0 45
Qt. can, making 25 gals. of fluid.....	75	90
1/2-gal. can, making 50 gals. of fluid.....	1 25	1 45
1-gal. can, making 100 gals. of fluid.....	2 00	2 30
5-gal. can, making 500 gals. of fluid.....	8 00	

LEE'S LIQUID LICE-KILLER

		Postpaid
1 quart.....	\$0 60	\$0 75
2 quarts.....	90	1 10
1 gallon.....	1 50	1 80

DR. HESS' INSTANT LOUSE-KILLER

1-lb. pkg.....	25	35
2 1/2-lb. pkg.....	50	60



A Powerful Non-Poisonous Germ-Killer

CLEAN, COLORLESS
NO ODOR AFTER USE

RECOMMENDED FOR

ROUP CANKER CHICKEN-POX WHITE DIARRHEA

Used in drinking water, prevents spread of disease. Cleanses infected spots—kills germs and cannot harm baby chicks. Ideal disinfectant for brooders and incubators. Kills odors and leaves no smell of itself.

The world's best poultry disinfectant. Used by poultrymen everywhere.

JUST TRY IT. Money-back guarantee on every package

INEXPENSIVE TO USE. B-K is concentrated—dilute with water

		Postpaid		
4-oz. bottle.....	\$0 30	\$0 40	1-gal. jug.....	\$2 00
10-oz. bottle.....	50	60	5-gal. jug.....	8 50
1-qt. bottle.....	90	1 05		

Write for Bulletin 213 on Poultry

Kill Disease Germs with



DISINFECTANT — GERMICIDE — DEODORANT

Use Sterilac in the drinking water to prevent roup and colds. Tests made on the typhoid bacillus show Sterilac to be forty-five times more powerful than carbolic acid in its power to destroy disease-producing germs—yet safe to use—superior to sodium hypochlorite and coal-tar disinfectants for poultry, being non-poisonous and costing less.

Sterilac is economical to use and holds its strength in hot or cold weather. Fresh solutions can be made as required. Being in powder form it does not freeze. Cleanliness and sanitation are the only foundation upon which a successful poultry business can be built.

Invaluable to poultrymen, hatcheries, creameries, farmers, and dairymen. Thousands of users endorse Sterilac. For disinfecting, one teaspoonful makes five gallons of solution. Complete directions on package. 2-oz. bottle \$1, 8-oz. bottle \$2.50, 16-oz. bottle \$4.50, 5-lb. pkg. \$18; postpaid \$1.10, \$2.60, \$4.65 and \$18.25.

Gold-Leaf Tobacco Powder

CONTROLS POULTRY ROUND WORMS

Manufactured especially for this poultry purpose. So certain is its action that it may well be considered a specific for the control of this trouble. The treatment is exceedingly inexpensive.

Mix two pounds of Gold-Leaf Tobacco Powder with 100 pounds of dry mash. 2-lb. bag 25 cts., postpaid 35 cts.; 10-lb. package 75 cts., postpaid 95 cts.; carton 6 10-lb. packages \$4.

F. and E. Chick Pick Remedy

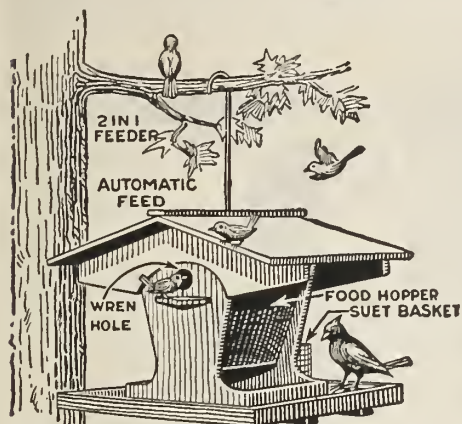
TO STOP TOE, WING, AND BODY PICKING OF CHICKS

This is not a medicine, but a habit-breaking ointment that will quickly overcome all cannibalism. Very effective and harmless. 4-oz. pkg. 40 cts., 8-oz. pkg. 60 cts., 16-oz. pkg. \$1, postpaid.

Get More Eggs at the Time of High Prices

LIGHT THE LAYING-HOUSE
WITH THE NEVER-FAIL TIME SWITCH

It has been conclusively proved that the electric-lighted hen-house pays big dividends. See page 190.



Two-in-One Hanging Feeder

In the winter-time this serves as a Feeder for the birds and a hanging Wren-House in the summer. It invites birds to your yard which you ordinarily would not have the opportunity of seeing. If the top is removed it is possible to see the tiny young Wrens. Stained brown. Size 12 inches wide, 10 inches high, and 11 inches long. \$2.50, postpaid.

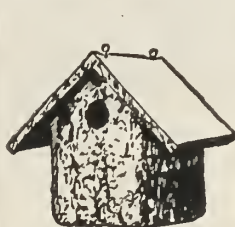
Bird Feed

A balanced ration of seeds for every species of Wild Song Birds. 10 lbs. 50c., ppd. 70c.

Bishop Rustic Bird-Houses

Of all the additions that may be made to the garden or ground, there are none that are more pleasant, entertaining, or useful than birds. The erecting of Bird-Houses is the most practical way of attracting them.

Naturally, the most successful Bird-Houses are those which most closely resemble the birds' original nesting-places. This fact accounts for the singular success of Bishop Rustic Bird-Houses.



No. 1



No. 4



No. 6

No. 1. Wren-House. A very successful rustic Wren-House, sturdily built of winter cut hemlock and southern cypress. It is intended to be hung from the branch of a tree. The roof may be opened for cleaning. \$1.85.

No. 2. Wren-House. A rustic Wren-House designed to be fastened against the trunk of a tree. An ornamental twig is attached to the front. \$2.10.

No. 3. Robin Shelter. Sheltered shelf for robins, phoebes, and other birds that will not nest in a closed house. \$1.85.

No. 4. Bluebird House. Very sturdy and practical House for bluebirds or tree swallows. This House is intended to be fastened against the trunk of a tree. \$2.50.

No. 6. Wren-House. A House of simple yet pleasing design. \$1.50.

No. 7. Tree-Swallow-House. This House is also suitable for bluebirds. It is especially designed to be mounted upon the top of a pole. \$2.10.

Any of these Houses sent postpaid for 25 cts. additional

Rutland Egg Preserver



Prepared from a high grade of water glass manufactured especially for the purpose.

There are many so-called egg preservers on the market; some are inferior water glass; some are not water glass at all. Water glass, not especially prepared for preserving eggs, may contain too much alkali; water glass can sometimes be bought in bulk by the quart, but this is not a safe way to purchase it as one knows nothing about the strength of the solution. This is a most important point in the preserving of eggs. The cost of eggs is such that it does not pay to take chances.

The prudent house-wife uses only an egg preserver prepared especially from a high grade of water glass—Rutland Egg Preserver.

A one-pint can will be sufficient for preserving about eight dozen eggs; the contents of a one-quart can will preserve from fifteen to twenty dozen.

		Postpaid
Pint Can.....	\$0 15	\$0 30
Quart Can.....	25	45
Gallon Can.....	85	1 15

Baby Chicks

Our Chicks are from culled and blood-tested flocks of bred-to-lay strains.

For many years we have made a specialty of furnishing Day-Old Chicks of all leading breeds. Beginning early in March, we will receive from near-by hatcheries from one to three shipments per week. To secure the breeds desired we suggest that orders be placed at least a week or ten days before the Chicks are wanted. Prices quoted on request.

O. K. Sanitary Poultry Litter

THE IDEAL PRACTICAL LITTER THAT COSTS SOME POULTRYMEN NOTHING

This wonderful peat moss litter pays the poultry keeper in two ways—besides saving labor and trouble and insuring most healthful sanitary conditions.

First, when once the proper amount is put in your poultry-house, you are through for the season. O. K. Sanitary Litter does not have to be taken out like hay,

straw, or other material that soon becomes filthy and dangerous. O. K. Litter absorbs the moisture of the droppings, coats over the solids, remains clean and effective for months, because it is light and very porous. Prevents odors, avoids dampness.

Second, O. K. Sanitary Poultry Litter is most economical. Its first cost by the bale is only a trifle more than hay, but as it lasts for months, it is far cheaper in the end. And all the time it is saving in the labor of removing and replacing. But above that there is another saving—a big profit to the user—and that is the worth of the used litter as a most valuable fertilizer.

Some poultrymen sell the "seasoned" litter to gardeners, florists, and others for more than the original litter cost. Others realize what this powerful nitrogen-filled litter is worth and use it themselves. Either way it has paid a big profit.

Use it for your laying-houses and for brooders in the spring. Put it on the dropping-boards.

Bales weigh about 175 pounds and cover about 80 square feet, 3 inches deep. Price, \$2.75 per bale; 5-bale lots, \$2.65 per bale.

Small sample bale, sufficient to cover 8 square feet, 2 inches deep (enough for the ordinary brooder) \$1.10, postpaid \$1.25.



Dog Remedies

Spratt's Dog Medicines

Tablets for Dogs or Puppies showing a tendency to weakness in joints.....	Postpaid \$0 60
Tablets for constipation.....	60
Sulfur Tablets. For heated blood, etc.....	60
Cough Tablets. Generally effect a quick cure.....	60
Digestant Tablets. For severe cases of indigestion.....	60
Astringent Tablets for Dogs. To relieve diarrhea.....	60
Special Tablets. A diuretic and stimulant.....	Postpaid \$1 00
Ear Canker Ointment. For both internal and external forms of this disease.....	75
Eye Lotion Tablets. A safe and efficient remedy.....	60
Flea Powder. For dogs, cats and other animals.....	30
Mange Medicine.....	75
Purgative Tablets. Perfectly safe and effective.....	60
Tonic and Condition Tablets. To build up after sickness and to put in bench-show form, etc.....	60
Capsules for Ascarids and Large, Round Worms in Dogs...	60
Capsules for Ascarids and Large, Round Worms in Puppies..	60
Dog Soap (White). For fleas, lice, etc. Entirely free from poison. Nicely perfumed and produces a fine lather	25



GLOVER'S IMPERIAL DOG MEDICINES

Round Worm Vermifuge. For puppies, dogs, foxes, and cats..	\$0 65
Round Worm Capsules. For puppies, dogs, and foxes....	65
Tapeworm Capsules. For puppies, dogs, foxes, and cats...	65
Tetrachlorethylene Capsules. For hookworms and round worms in puppies, dogs, foxes and cats.....	65
Condition Pills. Stimulant, digestive, appetizer, tonic....	65
Iron Tonic. Tonic, appetizer, and general stimulant.....	65
Digestive Pills. Soothing to the stomach and intestines. Stimulate digestion.....	65
Laxative Pills. For sluggish bowels and acute constipation.	65
Diarrhea Mixture. To check looseness of the bowels from simple inflammations and improper feeding.....	65
Compound Sulphur Tablets. Act upon the kidneys and intestines.....	65
Nerve Sedative. For fits and convulsions.....	65
Expectorant Mixture. To loosen the cough and quiet the spasms.....	65
Mange Medicine Sarcopic. Anticeptic and germicide; also a local application for Eczema.....	75
Kennel and Flea Soap. Kills fleas and lice. Promotes the healing of the sores of mange and eczema.....	25
Medicated Soap. A cleansing bath Soap for house dogs...	30
Cresol Disinfectant. Six times stronger than carbolic acid. For the dog, household, kennel, and farm.....	50
Flea and Insect Powder. Contains 100 per cent pyrethrum flowers; no filler added.....	50
Canker Wash. For the ears of dogs and cats.....	65
Eye Lotion and Eye Wash Powder (Combination Package)	65
Antiseptic Mouth Wash. For sore mouth and tongue, and inflamed gums in dogs and cats.....	65
Liniment. For muscle soreness, stiffness, and sprains of dogs. A strong liniment of even greater usefulness to man.	65
Sore-Foot Medicine. Prepared specially for hunting dogs..	65

Free Dog Book for Distribution

Mercy Mange Cure

An efficient remedy for mange, eczema, and other skin diseases of dogs and cats and for curing running sores and wounds of every description. Pt. can \$1.25, postpaid.

Sergeant's DOG MEDICINES



Special Medicine. For treating fever in pups and dogs....	Postpaid \$1 20
Mange Medicine. For treating skin diseases.....	65
Condition Pills. A tonic and alterative for pups and dogs.	60
Sure-Shot Liquid. For pups and older dogs. For owners who prefer a liquid vermifuge for round worms.....	60
Expectorant Medicine. For coughs and colds, in pups and dogs.....	60
Puppy Capsules. For young pups and toy breeds, for round and hookworms.....	60
Eye-Wash. For treating eye trouble in pups and dogs....	60
Sure-Shot Capsules. For round worms, pinworms and hookworms in older pups of any breed; also for large and older dogs.....	60
Tapeworm Medicine. For tapeworms in pups and dogs....	60
Arsenic and Iron Pills. (Compound.) A blood purifier. For treating blood and skin diseases.....	60
Canker Wash. For treating internal and external ear canker	60
Mouth Wash. For treating sore mouth and black tongue ..	60
Pepsin Tablets. (Compound.) For treating indigestion, vomiting, and colic in pups and dogs.....	60
Intestinal Astringent. For treating diarrhea and dysentery in pups and dogs.....	60
Diuretic Pills. An aid in treating rheumatism and lumbago in pups and dogs. Stimulates urinary action.....	60
Laxative Capsules. For treating constipation.....	60
Carbolic Tar Soap. A splendid all-purpose soap.....	25
Skip-Flea Soap. A wonderful bath soap for pups and dogs. Will kill fleas, lice, and certain other vermin.....	25
Skip-Flea Powder. For fleas and lice on dogs and cats....	25
Nerve Sedative Medicine. For running, barking fits.....	1 20
Shampoo Soap. For scalp and hair, for human use.....	25

Sergeant's Dog Book Free. Ask for it.



McKeon's Concentrated "Sulpho Dip" TRADE MARK REGD Formerly "Liquid Sulphur"

Nature's original treatment for mange, eczema, and all skin diseases on large and small hair-bearing or fur-bearing animals. Dilute in 20 parts water. Apply direct to affected area. Gives Sulphur baths like those at Mt. Clements. (As good for yourself as for your dog.) Ask your veterinarian or physician.

A drop or two in your animal's drinking water will act as a conditioner. 8-oz. bottle \$1.25 postpaid.

CAT FOODS AND MEDICINES

Spratt's Tablets for Constipation.....	\$0 60
Spratt's Purgative Tablets.....	60
Spratt's Special Tablets. A diuretic and stimulant.....	1 00
Spratt's Tonic and Condition Tablets.....	60
Spratt's Capsules for Ascarids and Large, Round Worms in Cats.....	60
Spratt's Food with Fish and Milk. A complete food for cats.	40
Kit-E-Ration. A balanced ration ready to serve. 1-lb. can 15 cts., 2 for 25 cts.	
Bennett's Crumbs. A food for cats.....	20
Catnip Mouse. Makes kittens playful. 15 cts. each, 2 for..	25
Cat Culture. A complete treatise on the care of cats.....	15

MILLER'S DOG FOODS

At last the food-experts at Battle Creek, Mich., have perfected a Dog Food that satisfies the tastes and appetites of 99 out of 100 dogs and keeps them healthy and happy. Crisp, golden cereals, pure lean meat, vitamins, and minerals are combined in Miller's in correct proportions to give your dog a savory, balanced diet.

Free samples and a valuable Dog Book sent on request. Write today.



BISCUIT		Postpaid
2-lb. carton.....	\$0 35	\$0 45
25-lb. sack.....	2 25	2 60
50-lb. sack.....	4 00	
100-lb. sack.....	7 50	
KIBBLES		Postpaid
2-lb. carton.....	\$0 35	\$0 45
25-lb. sack.....	2 40	2 75
50-lb. sack.....	4 25	
100-lb. sack.....	8 00	

RATION		Postpaid
5-lb. carton.....	\$0 60	\$0 75
25-lb. sack.....	1 65	2 00
50-lb. sack.....	2 75	
100-lb. sack.....	5 50	
PUPPY MEAL		Postpaid
2-lb. carton.....	\$0 35	\$0 45
25-lb. sack.....	2 40	2 75
50-lb. sack.....	4 25	
100-lb. sack.....	8 00	

"GIVE YOUR DOG A REAL TREAT"

You Can't Go Wrong on PERFECTION Dog Food Products



Perfection Products are nationally advertised, have been marketed for more than twenty years, and are fed and recommended by dog and kennel owners throughout the United States. Appetizing and relished by dogs of all breeds and puppies, all ages. Feed the Perfection Way, and that's the Economical Way.

MEAT-CEREAL		Postpaid
2 1/2 lbs.....	\$0 25	\$0 35
5 lbs.....	40	55
10 lbs.....	75	95
25 lbs.....	1 65	2 00
50 lbs.....	2 75	
100 lbs.....	5 50	
500 lbs.....	25 00	

CANNED MEAT FOOD. 1-lb. can
15 cts., 2 for 25 cts.; postpaid
35 cts. Case (48 1-lb. cans) \$5.50.

WHOLE BISCUIT		Postpaid
25 lbs.....	\$2 50	\$2 85
50 lbs.....	4 65	
100 lbs.....	8 50	

KIBBLED BISCUIT		Postpaid
2 lbs.....	\$0 35	\$0 45
5 lbs.....	75	90
10 lbs.....	1 25	1 45
25 lbs.....	2 65	3 00
50 lbs.....	4 90	
100 lbs.....	9 00	



Spratt's Dog Foods

His Health and Happiness Demand

The best foods you can buy. Your dog gives to you all that it is in his power to give; he asks for nothing in return. It is for you to stand by your dog where feeding is concerned. Good isn't good enough when you can get Spratt's.

Write for pamphlet on the care and feeding of dogs containing much valuable information

Spratt's Meat Fibrine Dog Cakes

For sixty years the standard dog food, used by the leading breeders and fed at the principal dog shows throughout the world. Carton 35 cts., postpaid 45 cts.; 5 lbs. 75 cts., postpaid 90 cts.; 25-lb. box \$3, postpaid \$3.35; 100-lb. box \$10.75.



Spratt's Oval Dog Biscuits

A small Meat Fibrine dog biscuit of superior quality. A few of these diminutive dog cakes can be carried in the pocket when on a ramble with the dog. Plain or with Charcoal. Carton 35 cts., postpaid 45 cts.; 5-lb. bag 85 cts., postpaid \$1.

Spratt's Fibo

A unique granulated food. It is very appetizing and highly recommended for shy and dainty feeders, as a change of diet or as a suitable food for any dog at any time. Can be given either dry or soaked. Carton 40 cts., postpaid 50 cts.; 5-lb. bag 85 cts., postpaid \$1; 25-lb. bag \$3.40, postpaid \$3.75; 100-lb. bag \$12.50.

Spratt's Puppy Cakes

A complete and perfect food for puppies from weaning time onwards, and for small breeds as the regular food instead of Spratt's larger Dog Cakes. Carton 40 cts., postpaid 50 cts.; 25-lb. box \$3.25, postpaid \$3.60; 100-lb. bag \$11.

Spratt's Cod-Liver-Oil Cakes. A valuable aid to convalescence of sick dogs, for old dogs and for puppies not making due progress. Carton 40 cts., postpaid 50 cts.

Spratt's Challenge Terrier Meal

An appetizing, granulated food. 5-lb. bag 65 cts., postpaid 75 cts.; 25-lb. bag \$2.60, postpaid \$3.05; 50-lb. bag \$4.75; 100-lb. bag \$9.

Chappel's Dog Foods—The Dog Food Supreme



Ken-L-Ration is clean, pure and wholesome as the food used on your own table, and is composed of fresh, lean meat, the best grade of whole cereals, and cod-liver oil tested for its vitamin potency. Because Ken-L-Ration is U. S. inspected and passed by the Department of Agriculture, it is your absolute guarantee of these facts. 1-lb. can 15 cts., postpaid 25 cts.; 2 for 25 cts., postpaid 35 cts.; case (48 1-lb. cans) \$5.40; 7-lb. can 75 cts.; postpaid 90 cts.; case (6 7-lb. cans) \$4.10.

Hemo-Ration is prepared to supply (in natural organic form) the strength-building, blood-making foods and health essentials needed by breeding stock. It is rich in easily digested blood solids, organic iron, natural calcium phosphate, cod-liver oil, meat and whole cereal. It aids in reproduction and helps produce strong pups. Fine for anemic dogs. Helpful in treating cases of rickets and chorea. 1-lb. can 15 cts., postpaid 25 cts.; 2 for 25 cts., postpaid 35 cts.; case (48 1-lb. cans) \$5.85.

Pup-E-Ration stands the test—the hardest test to which any growing food can be put—the growing of husky, strong-boned, well-formed puppies. It builds puppies—bone, flesh, muscle, hair—and furnishes them with strength to resist disease. Pup-E-Ration is made from red meat, organic iron, calcium phosphate, cod-liver oil tested for its vitamin potency, marrow-fat, and whole cereals. 1-lb. can 20 cts., postpaid 30 cts.; 3 for 45 cts., postpaid 60 cts.; 7 for \$1, postpaid \$1.20; case (48 1-lb. cans) \$6.75.

Maro-Meat. A clear meat-and-marrow product too highly concentrated for feeding alone. Designed for large consumers, as a basic meat ration to be mixed with Kib-L-Biskit or Ken-L-Meal. 2½-lb. tin 40 cts., postpaid 50 cts.; case (18 2½-lb. cans) \$6.25.

"Old Trusty" All Terrier Food

A granulated food of even balance, carefully mixed, not medicated or sweetened. An ideal food for all breeds, particularly terriers and active dogs. May be fed dry or moistened with milk or soup. Vegetables may also be added.

	Postpaid
Large carton.....	\$0 35 \$0 45
5-lb. bag.....	75 90
25-lb. bag.....	2 75 3 10
50-lb. bag.....	4 75
100-lb. bag.....	9 00



Pulvex

The Guaranteed Flea Powder

One application of Pulvex—the odorless and non-poisonous Flea Powder—will kill every louse, flea, tick, or mite on any animal or bird. It will also prevent reinfestation of fleas for many days. Pulvex is safe to use on dogs, cats, or birds, and is guaranteed to satisfy. 2-oz. pkg. 50 cts., postpaid 55 cts.



Moe's Dog Feeder

A substantial feeding-dish which will not tip over and provides a clean, practical method of feeding. Diameter 10¼ in.; depth 2 in. Blue Porcelain Enameled. 75 cts. each, postpaid 85 cts.

Ken-L-Biskits—small, square biscuits—can be fed to dogs of all kinds and all ages. Ken-L-Biskits, like Ken-L-Ration, contain all the nutritive elements so vital to growth, strength, and ability to resist disease. Good for puppies as well as grown dogs and old dogs. Ken-L-Biskit contains fresh, pure, lean meat from animals that have been U. S. inspected and passed by the Department of Agriculture, whole cereals, egg-yolks, first clear wheat flour, and other nutritious ingredients. 25-oz. pkg. 30 cts., postpaid 40 cts.; 3 for 80 cts., postpaid \$1; case (12 25-oz. pkgs.) \$2.75.

Kib-L-Biskit is made of exactly the same ingredients as Ken-L-Biskit, except that it is kibbled (broken and screened to a uniform, small size). It can be fed dry or crumbly moist to dogs of all sizes and kinds. 5-lb. bag 75 cts., postpaid 90 cts.; 25-lb. bag \$3, postpaid \$3.35; 50-lb. bag \$5.75; 100-lb. bag \$11.

Ken-L-Meal will be found an outstanding biscuit food of quality, not just a filler but a good wholesome food. Ken-L-Meal contains a large percentage of fresh, lean, raw meat, and the correct amount of fresh green bone. 25-lb. bag \$2.75, postpaid \$3.10; 50-lb. bag \$5.25; 100 lb. bag \$10.

Kit-E-Ration. The ingredients in this cat food contain properties so very essential for the growth and development of the cat or kitten. It is the Cat Food Supreme. A wonderfully balanced ration—ready to serve. 1-lb. can 15 cts., postpaid 25 cts.; 2 cans for 25 cts., postpaid 35 cts.; case (48 1-lb. cans) \$5.75.



Vitamont Dog Food

A concentrated food for dogs, cats, and foxes. It is a complete balanced food, ready to serve. 1-lb. can 15 cts., postpaid 25 cts.; 2 for 25 cts., postpaid 35 cts.; case (48 1-lb. cans) \$5.10.

IMPERIAL DOG FOODS

Imperial Dog Foods supply the essential food-elements that all dogs require. They eliminate the guess-work from feeding and keep your dog healthy and full of pep. All dogs relish Imperial Foods because of their crisp tastiness and enticing flavor, and you will find them both convenient and economical to feed.

Imperial Dog-Ration. (Kibbled.) Primarily a high-quality health-promoting, balanced ration Dog Food designed especially for kennel use to form a major part of the dog's diet. 1¼-lb. pkg. 20 cts., postpaid 30 cts.; 5-lb. bag 65 cts., postpaid 80 cts.; 25-lb. bag \$2.25, postpaid \$2.60; 50-lb. bag \$4.

Imperial Dog Biscuit. An all-round balanced ration diet for mature dogs. They are "balanced in vitamins" and the nutritional values that keep dogs in vigorous, healthy condition. 5-lb. bag 75 cts., postpaid 90 cts.; 50-lb. bag \$4.50.

Imperial Meat-Ration. A food that eliminates your worries about correct diet—a food composed of 50 per cent pure, cooked fresh meat with cereals, vegetables, grains, and minerals. Absolutely nothing to be added but a little water to mix into a tasty, nourishing mash that your dogs and puppies will relish and thrive on. 1¼-lb. pkg. 25 cts., postpaid 30 cts.; 4-lb. bag 65 cts., postpaid 80 cts.; 25-lb. bag \$3, postpaid \$3.35; 50-lb. bag \$5.50; 100-lb. bag \$10.

Imperial Dominoes. The ideal Biscuits for small breeds. Small, tasty, and highly nutritious, they are just the right size for the puppies and do not have to be broken or soaked up. 22-oz. pkg. 25 cts., postpaid 35 cts.; 5-lb. bag 75 cts., postpaid 90 cts.; 50-lb. bag \$5.25.

Sergeant's DOG FOOD

Correct food elements in proper proportion are of first importance in feeding puppies and dogs. Sergeant's Dog Food is the result of long study and experience in feeding. It carries all the best food essentials, and is a quick, easy way to feed. It contains clean, freshly cooked beef, and whole-wheat flour, together with other necessary ingredients. A properly balanced ration. 2-lb. pkg. 40 cts., postpaid 50 cts.



Bennett's Milk-Bone Dog and Puppy Biscuits

A FOOD THAT ALL DOGS LOVE

Milk-Bone is made to meet the particular physical needs of dogs; it is made to suit the peculiar digestive organism of dogs. Milk-Bone not only provides the necessary energy-producing material, but it also supplies the materials for tissue repair.

Milk-Bone keeps a dog in sound health, with good digestion, sweet breath, and regular habits.

Dogs fed on Milk-Bone enjoy every minute of life because they have the buoyancy and pep that go with proper nourishment and perfect health.

Milk-Bone is made to give a dog the sustenance he needs, the food he favors, without burdening his digestive system.



	Each	Postpaid	3 for	Postpaid
Puppy Biscuit, 26-oz. carton....	\$0 35	\$0 45	\$1 00	\$1 20
Dog Biscuit, 29-oz. carton.....	35	45	1 00	1 20



ROSE'S Dog and Puppy Feed

A Balanced Food for Dogs and Puppies

Feed Rose's Dog and Puppy Feed for thirty days and note the decided improvement in the general condition of your dogs and puppies. Prevents rickets and other minor ailments so common in all dogs and puppies.

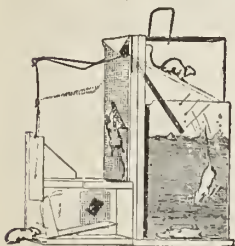
While it can be fed in its raw state, it is easily prepared by cooking, baking or many other ways best suited to the individual taste of your dog.

Sizes		Postpaid
2-lb. boxes.....	\$0 25	\$0 35
5-lb. boxes.....	50	65
10-lb. cotton bags.....	75	95
25-lb. cotton bags.....	1 50	1 85
50-lb. cotton bags.....	2 50	
100-lb. cotton bags.....	4 50	

Literature and free samples mailed upon request

Peerless Rat and Mouse Trap

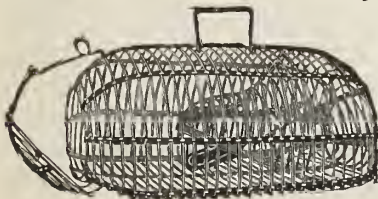
Every Rodent Sets the Trap for Its Follower



The Peerless Always-Set Trap is the scientific means of dealing death to sneaking, wily rats and mice. It is positively automatic in operation, and, barring accidents, cannot get out of order. It leads the animal to certain death, and each one killed sets the Trap for another to follow.

Mouse Trap \$3, postpaid \$3.20.
Rat Trap \$8.50.

Surprise Rat Trap



This Trap is very strongly made, having more stiffening ribs and cross-wires than Traps of similar pattern. Made of No. 17 coppered wire 16 in. long, 9 in. wide, 7 in. high. 85 cts., postpaid \$1.

Chamberlain's Perfect Bird Food

WITH VEGETABLE AND EGG FLAKES

Birds properly fed do not need a song restorer.

Give your bird a treat and let him be the judge.

Contains a large variety of thoroughly cleaned, choice, sound and sweet imported and domestic seeds, each in just the correct proportions.

Every seed and every article has its own particular purpose and duty to perform, such as enhancing the brilliancy of the plumage, improving the song, keeping the bird healthy, bright and cheerful.

Always fresh—sold only in damp-proof cans. 10-oz. can 25 cts., postpaid 30 cts.; 50-oz. can \$1, postpaid \$1.15.



Bird Foods and Remedies



Spratt's Egg-Flake and Fruit Can-ary Mixture. 15-oz. pkg.....\$0 25 \$0 30

Spratt's Cod-Liver Oil Cage Bird and Nestling Food. For feeding young birds and old birds in the moulting season. A tonic and flesh and bone-maker. Unequaled as an aid to feather-growth. 4-oz. pkg.....

15 20

Spratt's Song Restorer. For birds who have lost voice from the effect of cold or excessive moulting. Invaluable for breeding birds and their young. 4-oz. pkg....

25 30

Spratt's Sing-Song. For health and song.....

15 20

Spratt's Tonic for Birds. 1-oz. bottle.....

25 30

Spratt's Parrot Mixture. A mixed food for parrots. 10-oz. pkg.....

25 30

Spratt's Pollicrackers. Specially prepared and adapted for parrots of all kinds. 10-oz. pkg....

15 20

Bird Manna. Keeps cage birds in constant song, improves their plumage, and prevents disease....

15 20

Silver Brand Bird Gravel. 30-oz. pkg.....

15 20

Chamberlain's Bird Gravel, with Charcoal. 24-oz. pkg.....

15 20

Burnett's Bird Nesting.....

10 15

Burnett's Canary Louse Powder. 1-oz. pkg.....

25 30

Burnett's Unexcelled Bird Food. A song restorer. 10-oz. pkg.....

25 30

Burnett's Co or Food for Cage Birds. Enriches the color of the plumage. 6-oz. pkg.....

30 35

Burnett's Bird-Wash. For use on canary birds and parrots. Non-poisonous. 9-oz. pkg.....

35 40

Burnett's Celebrated Tonic for Birds. For loss of song, weakness, or moulting, asthma or hard breathing and colds. 6-oz. pkg.....

35 40

Magic Song Restorer and General Health Food. For all seed-eating birds. 6-oz. pkg.....

25 30

Bird Health. A conditioner and song restorer for birds. 2-oz. pkg.....

15 20

Dr. Gunnings Universal Bird Tonic. For loss of song, weakness, asthma and all other diseases of cage-birds.....

50 55

Fish Foods

Spratt's Natural Fish Food. Tin 15 cts., 2 for 25 cts.

Spratt's Aquarium Fish Food. 10-oz. punch-top tins, 15 cts., 2 for 25 cts.

Spratt's Wafer Fish Food. Large carton 10 cts.

Spratt's Tropical Fish Food. 15 cts. each, 2 for 25 cts.

Spratt's Zeke. Dried flies for turtles, fish, etc. 1/2-oz. pkg. 15 cts., 2 for 25 cts.

BOOKS FOR POULTRYMEN

On this page it has been our aim to give a representative list of books devoted to practical poultry-keeping. There are many other books on this subject, and if we do not list the particular book you want, write us for prices. We can furnish any poultry book published. The books in the following list will be sent postpaid at the prices given.

American Standard of Perfection. Published by the American Poultry Association and is the American authority on the recognized characters of all varieties of chickens, turkeys, ducks, and geese. The Standard contains "ideal" pictures made from photographs of living models, showing fowls of many different breeds. It is the one book most used by judges, fanciers, and breeders, and is the only recognized authority in awarding prizes in the poultry shows of the United States and Canada, and is the "last word" on all questions that arise in regard to the characters of standard-bred fowls. Size and weight of birds of the different breeds, their shape, carriage, markings, etc., are officially described in this book. Contains 368 pages, 112 full-page illustrations, and is printed on fine paper. Cloth binding, \$2.50.

The Call of the Hen. This book tells you how to pick out the hens that will lay the most eggs, which knowledge will enable you to sell off the poor layers before they have eaten their heads off, thus saving you a considerable feed-bill, lots of unnecessary work, and bringing you larger returns on your investment. "The Call of the Hen" always shows you how to pick out the profitable layer from the rest of the flock; how to pick breeders that will transmit their laying ability to their progeny. \$2.

Modern Fresh-Air Poultry Houses. By Prince T. Woods. It explains fresh-air methods, quotes prominent authorities, tells about practical experience, and gives evidences proving the beneficial results of fresh-air methods. Over 100 illustrations. Cloth binding, \$2.

Poultry-Houses and Fixtures. Ninth Edition. Revised and edited by H. W. Jackson. Gives complete plans and bills of material for all kinds of houses designed to meet every practical need and for every condition of location and climate. Special attention is given to convenient, labor-saving devices for interior and exterior use. 320 pages, illustrated. Paper, \$2.

Best Methods of Culling. In these days, the progressive poultryman gets rid of his drones, or non-producers, and gives their room and their feed to fowls he knows, by testing according to the rules in this book, are hard-working, heavy layers. This book gives the information in easily understandable form. Completely illustrated. 50 cts.

Best Plans of Poultry-Houses. Many poultry-houses are unhealthful for the fowls; many are inconvenient to do the work in. Both lead to failure. Following the plans in this book is assurance that you will have a satisfactory poultry-house at the least expense. It is a money-saver and a money-maker. Completely illustrated. 50 cts.

Best Methods of Feeding. Neither profit nor satisfaction is possible where wrong methods of feeding prevail. Any except the best methods are expensive, wasteful, and do not produce the results that count. This book gives, in boiled-down, plain descriptions, the methods of feeding which have produced the best results. It is the most beautifully illustrated book ever offered American poultry-keepers. 50 cts.

High Egg-Production. By individual Hens, Pens and Flocks. By Homer W. Jackson and Grant M. Curtis. Everything known on this subject will be found in this new book brought right up to date. 176 pages; illustrated. \$2.

Poultry for Exhibition. By John H. Robinson. This book will tell you what you need to know about growing, conditioning, training, showing and judging poultry. 176 pages. Profusely and finely illustrated. \$2.

Fundamentals in Poultry Breeding. By John H. Robinson. 160 pages; well illustrated, including 50 full-page plates. \$2.

Profitable Culling and Selective Flock Breeding. By G. M. Curtis and H. W. Jackson. Only complete work on culling. Fully describes all approved methods of selecting layers. New edition. 320 pages. Paper, \$2.

The Production of 300-Eggers and Better by Line Breeding. By M. E. Atkinson and Grant M. Curtis. Treats largely of latest advance steps in poultry culture and systematic line breeding. 400 pages. Paper, \$2.50.

The Leghorns. By J. H. Drevenstedt. This is the most complete textbook ever written about the Leghorn. 144 pages; attractive illustrations. \$1.

The Plymouth Rocks. By Wm. C. Denny. An authoritative textbook and instructive treatise that explains standard requirement and tells how to select the right breeders and how to mate to insure best development and showroom success. Such important subjects as double mating, line breeding, strain building, etc., are treated by past masters in the art of breeding. 144 pages; illustrated. \$1.

The Wyandottes. By J. H. Drevenstedt. The standard qualities of all varieties of Wyandottes are fully described and complete information given on how to mate and breed, how to exhibit and judge them. The distinctive Wyandotte type is fully described. 160 pages; beautifully illustrated. \$1.

The Campines. By F. L. Platt. The contributors to this book are the leading Campinists of the United States, England, Belgium, and Canada. It represents the results of two years of work and preparation, and is a valuable guide to Campine breeders. 88 pages. 75 cts.

The Orpingtons. By J. H. Drevenstedt. The most comprehensive and most beautifully illustrated book published on this breed. 75c.

Egg Record and Account Book. A simple, easy method of keeping correct accounts by the day, month, and year, of all expenses and income. Also a record of all eggs laid, set, or sold; of chicks hatched and sold, and a record of orders as filled. 40 cts.

How to Make Poultry Pay. 116 pages. Paper binding, \$1.

The Bantams. 256 pages; 115 illustrations. Cloth binding, \$2.

Use of Artificial Light to Increase Winter Egg-Production. By G. M. Curtis. 112 pages; 5 pages of instructive, helpful color-plates. \$1.50.

Rabbits and Ducks

American Rabbit Culture. By A. E. Facey, Jr. Tells everything you need to know about rabbits from beginning to end. New—just off the press. Paper binding, \$1.

Care and Management of Rabbits. By Chesla C. Sherlock. A complete guide for all phases of care, breeding, and management of rabbits. Illustrated. Cloth binding, \$1.25.

Outdoor Opportunities. Tells how to make money in spare time, mostly outdoors. Written by men and women of practical experience. 256 pages; 118 photographs, \$2.

Making a Living with Rabbits. 96 pages. 50 cts.

Principles of Fur Farming. 160 pages. \$1.50.

Rabbits and Dollars. 72 pages. 50 cts.

Growing Ducks and Geese for Profit. By John H. Robinson. Complete textbook of domestic water-fowl, giving the latest and best methods for housing, feeding, incubation, brooding, and marketing. 448 pages; upwards of 200 illustrations. \$2.50.

Pigeons and Squabs

A to Z of Pigeons. By E. J. W. Dietz. New edition. The last word on pigeons. 156 pages; 51 illustrations. \$1.

National Standard Squab Book. By E. C. Rice. All about breeding pigeons and growing squabs for market. 416 pages; 211 illustrations. 50 cts.

Pigeon Disease and Feeding Management. By E. J. W. Dietz. Most complete information available on diseases. Chapter on general care. 78 pages; illustrated. 75 cts.

Pigeon Loft Register. 40 cts.

Bees

Starting Right with Bees. Every beginner in bee-keeping should own this book. Fabrikoid, 75 cts.

ABC and XYZ of Bee Culture. The largest and most complete work on bees ever published. An encyclopedia on its subject. Latest edition. Fabrikoid cover, \$2.50.

Turkeys and Pets

Parrots and Other Talking Birds. By Chas. N. Page. The most complete work on this subject. 35 cts.

Cat Culture. An instructive book treating on the care, breeding, and diseases of cats. 64 pages. 15 cts.

Canary Breeding and Training. By Charles N. Page. A treatise on the breeding, rearing, training, and care of Canary Birds. 101 pages; illustrated. 35 cts.

Turkeys. By Prof. A. C. Smith. Turkeys can be raised profitably, and this book tells you how, in every detail, clearly. 50 cts.

Turkey Production. By L. E. Cline, B.S., M.S. A complete text on breeding, feeding, handling, marketing, and disease control, prepared for the use of turkey producers and agricultural students. A new book—just published. Covers every detail with latest information. 300 pages; 93 illustrations. Cloth binding, \$3.

Dogs

Training the Dog. By Will Judy. For all breeds. Many illustrations. Includes full information on feeding, quarters, grooming, bathing, house breaking, and care of the dog in health and sickness. The best book of its kind yet published. Written scientifically and yet plainly, so that the instructions can be easily applied by the owner of one or many dogs. \$1.50.

Dog Encyclopedia. By Will Judy. The only complete reference work on dogs, giving the photograph, history, description and official standards of all breeds, and giving also full information about all of the other dog subjects, such as breeding, grooming, kenneling, exhibiting, importing, and the like. It answers every question about dogs. 163 illustrations. \$3.

The Boston Terrier. By Vincent G. Perry. Profusely illustrated with the photographs of the leaders of the breed. \$2.

Principles of Dog Breeding. By Will Judy. \$2.

The Chow Chow. By Dietrich-Davies. \$2.



Books for better Gardens

WE have endeavored on this page to give a list of Farm and Garden Books that will be read with interest and profit by the majority of the readers of our Catalogue. There are, however, hundreds of others, just as readable and of equal value, which we do not have the space even to name. We will be glad to secure for our readers any book now in print on any particular subject. Just give us the subject and we will tell you what is available and the price. Any of the books sent postpaid.

1001 GARDEN QUESTIONS ANSWERED. By Prof. Alfred C. Hottes. A guide-book to daily operations, covering the flower-, fruit-, and vegetable-garden. A wealth of garden facts which hundreds of men have spent their lives in obtaining will be found in this book. 80 illustrations. Paper binding, \$1.50; cloth, \$2.

GARDEN GUIDE. Unrivalled manual on flowers, fruits, vegetables, etc. Covers every step from spading the ground to preserving the harvest. 384 pages; 275 illustrations. Paper binding, \$1; cloth, \$1.50.

LAWNS. By F. F. Rockwell. You will find use for this information year after year, for it shows both how to start a lawn right and how to keep it smooth and velvety thereafter. Full of suggestions on laying out the lawn, grading, fertilizing, planting, care after planting, weed and pest control, and remaking and repairing old lawns. 87 pages; 39 illustrations. \$1.

SHRUBS. By F. F. Rockwell. Brief but complete and usable information on the best ways to improve the beauty and value of your home with shrubs. Tells what to select for different combinations and effects, and how to plant, water, mulch, prune, and care for shrubs. 76 pages; 49 illustrations. \$1.

THE BOOK OF SHRUBS. By Alfred C. Hottes. The most complete and informative book on the care and cultivation of shrubs for the amateur. Gives all details of care, culture, soils, fertilizers, diseases, propagation, etc. 446 pages; 187 illustrations. Cloth, \$3.

THE BOOK OF BULBS. By F. F. Rockwell. Here is the "last word" on bulbs and how to grow them in the garden. Pictures and text show and tell just how to make the most from bulbs in your garden, both outdoors and inside the home. Includes peonies, dahlias, irises, gladiolus, etc., as well as tulips, narcissus, hyacinths, and other true bulbs. Interesting and practical. 264 pages; 187 illustrations. \$3.

ALL ABOUT FLOWERING BULBS. By T. A. Weston. Complete information on care and culture of bulbs of all seasons and some information on bulbs that may be brought in the house. 186 pages; 8 full-page color-plates; 65 full-page half-tones. Cloth, \$2.

MODERN DAHLIA CULTURE. By W. H. Waite. Written to meet the needs of the novice and to interest and inform the expert. Biggest book value there is for dahlia-lovers. 132 pages; 6 full-page color-plates and 24 half-tones. Cloth binding, \$1.50.

DAHLIAS. By F. F. Rockwell. All dahlia-lovers will profit from this interesting and helpful book. It describes the various types and tells their uses, how to plant and grow them, the fertilizers to use, how to control pests, how to harvest and store, grow for exhibition, and how to propagate and hybridize. 80 pages; 65 illustrations. \$1.

GLADIOLUS. By F. F. Rockwell. Tells how to plant, fertilize, and cultivate; how to grow from seed or bulblets; how to harvest and cure; how to handle for cut-flowers; and every other detail needed for success with this popular flower. 79 pages; 45 illustrations. \$1.

ROSES. By F. F. Rockwell. This book has a new classification of roses which makes it easy for every home-garden owner to pick the kinds that will succeed. It includes brief and helpful directions on rose-care and culture, planting, propagation, and pest-control. 86 pages; illustrated. \$1.

HOW TO GROW ROSES. By Pyle, McFarland, and Stevens. Makes every step in the culture and care of roses so clear that any grower can understand it and succeed with them. A completely re-written edition of America's most popular rose book. 211 pages; 138 illustrations, including 45 varieties illustrated in color. \$2.

THE BOOK OF ANNUALS. By Prof. Alfred C. Hottes. A reliable guide through the season of annual bloom. 180 pages; 155 illustrations. Cloth binding, \$1.50.

PERENNIAL GARDENS. By H. S. Orloff. Following the simple directions in this book insures a perennial garden crowded with bloom, in which the colors make a perfectly blended picture. First come plans, showing how to locate and lay out the garden; then clear directions for preparing the soil, fertilizing, planting, cultivating, transplanting and propagation. 90 pages; 18 illustrations. \$1.25.

THE BOOK OF PERENNIALS. By Prof. Alfred C. Hottes. Devoted to the general principles of growing, using, selecting, and propagating perennials, followed by a number of comprehensive lists of perennials suited for different locations and purposes. 280 pages; over 100 illustrations. Cloth, \$1.50.

THE WOMAN'S FLOWER GARDEN. By Jane Leslie Kift. A book written especially for women on the care of flowers and plants in the home and on their cultivation in the garden. 160 pages; 15 illustrations. Cloth, \$1.25.

ROCK-GARDEN PRIMER. By Archie Thornton. The feature of this book is the wealth of information on construction of different types of rockeries. 152 pages; 4 color-plates and 70 other illustrations. Leatherette, \$2.

FLOWERS OF THE WILD. By Frank C. Pellett. The care and culture of wild flowers on your own grounds. Covers most of the common wild flowers suited for naturalization or cultivation in the northeastern states and the best of them from the West. 168 pages; 4 full-page color-plates; 104 half-tones. Cloth, \$2.

EVERGREENS FOR THE SMALL PLACE. By F. F. Rockwell. All the information you need to make the best use of evergreens is in this handy book, written by one who is himself a home-owner and a garden-maker. It tells the uses, characteristics, and types of dwarf evergreens, and details of their planting, transplanting, and general care. 84 pp.; 67 illustrations. \$1.

HORTUS: A CONCISE DICTIONARY OF GARDENING. By L. H. and Ethel Z. Bailey. Easy to use, accurate, and non-technical, this great book comes closer than any other single volume to answering every question about gardening. It includes every kind of ornamental, fruit, and vegetable plant grown today, with brief but complete information on their uses, cultivation, hardiness, propagation, preferred soil, color, identification, etc. Common names are used throughout, all botanical terms are defined, and the book is so conveniently arranged and compressed that it is marvelously easy to handle. 652 pages; 35 illustrations. \$10.

ROCK-GARDENS. By F. F. Rockwell. Shows just how you can build a rock-garden yourself, on a small or large scale, and at little expense. Describes the types of rock-gardens; tells what soils, climates, and locations are best; how to construct; and what to plant for the effect you want. Let this practical book demonstrate the fascination of this form of gardening and guide you to success. 86 pages; 31 illustrations. \$1.

LANDSCAPING THE SMALL HOME. By Edward W. Olver. Written especially for the owner of a small home and giving him full information as to beautifying his own place—both garden and land. 160 pages; 90 illustrations. Cloth, \$2.

ADVENTURES IN A SUBURBAN GARDEN. By Louise Beebe Wilder. Whether you have a rock- or wild-garden or just a plain home-garden, you will find a gold mine of practical information about the uses and behavior of over 500 new and old varieties of plants in this new book by one of America's best gardeners. Bulbs, roses, annuals, perennials, alpine, wildlings, color schemes, and care of the garden are all included. 265 pages; 19 illustrations. \$3.50.

THE OUTDOOR LIVING-ROOM. By L. W. Ramsey and C. H. Lawrence. All at once, or little by little, as your time and purse allow, this book will help you make a beautiful outdoor living-room, either around a new home or one already planted. Helpful illustrations and clear text take you through every operation from start to finish. The principles set forth apply in every climate and may be carried out in a wide variety of plant materials. 139 pages; 98 illustrations. \$2.50.

PRACTICAL PLANT PROPAGATION. By Prof. Alfred C. Hottes. An exposition of the art and science of increasing plants, as practiced by the nurseryman, florist, and gardener. 224 pages; illustrated. Cloth binding, \$2.

OUR NATIVE CACTI. By Ethel Bailey Higgins. Covers small cacti "dishes" to cacti gardens. Characteristics, descriptions of plants, fruits and flowers, their uses, habitat of the plants, flowering periods, diseases, cultural directions, etc. 182 pages; 4 full-page color-plates; 56 half-tones. Linen cloth, \$2.

AROUND THE YEAR IN THE GARDEN. By F. F. Rockwell. This splendid book, written by one of America's best-known practical gardeners, is unique in its usefulness. It starts with preparations for the season's work in January and outlines a balanced program for the garden through every week in the year. Bound to bring you success. 350 pages; 88 illustrations. \$2.50.

THE GARDENER. By L. H. Bailey. This book gives you the very essence of Dr. Bailey's unequaled knowledge of gardening. It tells how to grow flowers, vegetables, and fruits from the time of planting through to maturity. Special articles on different types of gardening. Arranged alphabetically. 260 pages; 116 illustrations. \$2.

HOME FLOWER-GROWING. By E. C. Volz. This book is a real flower-garden encyclopedia! It gives up-to-the-minute directions for growing every kind of garden flower, with instantaneous reference through an unusually complete index. Also tells how to prepare exhibits for a flower show, and how to organize a garden club. 364 pages; 151 illustrations. \$3.50.

PRACTICAL VEGETABLE CULTURE. By Albert E. Wilkinson. Covers all phases of vegetable culture, from sowing the seed to reaping the harvest, and is useful for both amateur and professional. 308 pages; 135 illus. \$2.

MANUAL OF GARDENING. By L. H. Bailey. A guide for planting and landscaping the home grounds. Tells how to make the most of natural features; how to drain, cultivate, and fertilize the soil; how to sow, propagate, transplant, prune, and graft the different fruits, vegetables, and flowers. Lists of varieties for different purposes. 539 pages; 350 illustrations. \$3.

THE LITTLE PRUNING BOOK. Tells how to grow better fruits and flowers by pruning. 50 cts.

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The 1932 PITTSBURGHER

Collection of 4 Roses worth \$3.50 for \$2.75, postpaid

Selected as the most striking varieties in their respective colors, the four Roses offered here are distinct bargains. We strongly urge you to plant three or more of these Collections in order to fill a fair-sized bed from which you may cut handsome Roses from early June until freezing weather.



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Dame Edith Helen



Etoile de Hollande



Mme. Edouard Herriot

MRS. E. P. THOM. Golden yellow.

DAME EDITH HELEN. Pink.

MME. EDOUARD HERRIOT. Coral-pink.

ETOILE DE HOLLANDE. Best crimson.

Four Sturdy Plants for \$2.75, postpaid

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From the hundreds of new varieties of Roses, as well as the standard old sorts, we have selected those offered on this page as the choicest sorts which can be grown successfully in this climate. Either of these Collections will produce blooms that will give perfect satisfaction, but to enjoy Roses to the utmost, it is best to plant several bushes of the same variety. In consequence, we urge you to buy several sets of each so that large bouquets of Roses of the same variety may be cut throughout the season. With each Collection we will send free a copy of "Garden Roses, How to Make Them Grow and Bloom," a book which tells all that it is necessary to know for the cultivation of these plants.

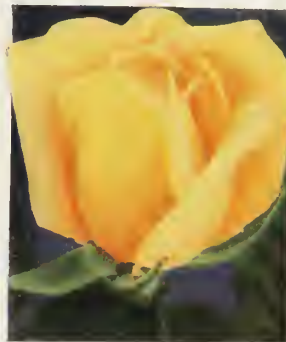
DESCRIPTIONS OF THE VARIETIES ARE FOUND ON PAGES 54 AND 55



Mrs. A. R. Barracough



Kaiserin Auguste Viktoria



Ville de Paris



Francis Scott Key

The 1932 Fort Duquesne Collection

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In this Collection, some of the most beautiful Roses in existence find a place. The gigantic Mrs. A. R. Barracough, the brilliant colored Talisman, the flaming Betty Uprichard are known and cherished wherever Roses are grown. The gorgeous Francis Scott Key is one of the most stunning varieties ever raised, while Kaiserin Auguste Viktoria has long been known as the finest white Rose in the world. Ville de Paris was named for the city of Paris by the delighted officials of that city when it won the Gold Medal in a great contest several years ago. Four of the Roses in this collection are new, outstanding varieties. One plant each of these six famous Roses will be sent for \$4, postpaid. Order several collections and you will have a beautiful Rose-garden.



Betty Uprichard



Talisman

Scott's Purity Lawn Grass Seed

This seed contains a mixture of grasses which will produce a deep-rooting, durable lawn able to withstand the heat and dryness of summer and the cold of winter. Because of the even blending of the grasses, which mature at different seasons, a properly prepared lawn, sown with Scott's Purity Seed, is green from early spring until late in the autumn. Lb. 45 cts., 5 lbs. \$1.75, 10 lbs. \$3, 100 lbs. \$26.



Scott's Shady Lawn Grass Seed

In every lawn there are places where ordinary grass will not grow, no matter how carefully it is seeded, fertilized, and tended. In such places, Scott's Shady Lawn Mixture is the thing to plant. It contains mixed seeds of grasses which thrive in the shade of trees and buildings, and will make a fine, thick, even turf where other grass will not grow. Lb. 55 cts., 5 lbs. \$2.25, 10 lbs. \$4, 100 lbs. \$32.

Bent Lawn Grass Seed

This is composed of Agrostis varieties only, a mixture of Bent Grasses and Red Top. In rich soil it produces a deep, rich green turf much finer in texture than a lawn of ordinary type. Lb. 90 cts., 5 lbs. \$4.25, 10 lbs. \$8, 100 lbs. \$70.

SEEDS, ROSES, TREES, SHRUBS, PLANTS, BULBS
AGRICULTURAL IMPLEMENTS
POULTRY, DAIRY, AND BEE SUPPLIES

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